

# THE TYPE-MATERIAL OF AUSTRALASIAN, ORIENTAL AND ETHIOPIAN TACHINIDAE (DIPTERA) DESCRIBED BY MACQUART AND BIGOT

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## SYNOPSIS

Alphabetical catalogues are given of the 168 nominal species of Tachinidae described from the Old World (exclusive of Palaearctic Region) by J. Macquart and J. M. F. Bigot, with an account of all located type-material on which the names are based. Thirty-nine lectotypes are newly designated. The few relevant nomina nuda published by Macquart and Bigot are included, together with those nominal species recorded from the area covered but now known either not to be Tachinidae or to have come from other regions.

## INTRODUCTION

THE development of Tachinid taxonomy from the alpha to the beta stages (as Mayr, 1969, defines these), and the preparation of synthesizing revisionary works which this will necessitate, is much hampered by the multiplicity of names involved and the lack of catalogues bringing these together (even on a regional basis). From the Australasian, Oriental and Ethiopian Regions together slightly more than 700 genus-group segregates and 2,400 nominal species-group segregates have been described, but undoubtedly there is much synonymy of generic and specific names, and systematic catalogues are needed for the Tachinidae of each of these zoogeographical regions which will render some order out of the present chaos. The preparation of such catalogues is currently in hand (Crosskey, in preparation),

but depends entirely on detailed study of the large numbers of types involved, for in a family such as the Tachinidae—where nomenclatural confusion has reached almost classic proportions—it is vital to see as many as possible of the types in order to get the nominal species assigned correctly to recognizable generic and tribal concepts, and more especially to study the types of the older authors which have too often been neglected (and their nominal species, as a consequence, often wildly misinterpreted).

Although a few earlier authors (particularly Wiedemann and Robineau-Desvoidy) had described some Tachinidae from the exotic and mainly tropical regions of the Old World, it was Macquart between the years 1835 and 1855 who first described a really significant number of forms and to whom so many of the names of Palaeotropical genera and species date back in priority. Consequently the types of Macquart have an almost unique importance for the taxonomy of non-European Tachinidae, and an account of his type-material of Australasian, Oriental and Ethiopian Tachinidae is therefore here presented in advance of the projected regional catalogues. Bigot's work, though very extensive on the New World Tachinidae, is of minor significance in the Old World fauna, but as many of Macquart's nominal species were based upon specimens he received from Bigot's collection—and as Bigot was an immediate and important successor to Macquart as a describer of exotic Tachinidae—I have considered it natural to take account of Bigot's type-material in the same paper as that of Macquart's. There is much need of a similar paper to the present one which would deal with Macquart's and Bigot's types of Tachinidae from the Western Hemisphere (for Bigot, especially, described many species from the Neotropical Region), but preparation of papers of this kind is laborious and time-consuming, and I shall be unable to undertake such a paper myself in the foreseeable future; it is hoped, however, that a North American specialist on the Tachinidae will be able to prepare such a companion paper.

I have presented this paper in two parts, the first dealing with the nominal species described by Macquart, and the second part with those described by Bigot. The alphabetical lists include not only the available species-group names, but also (for completeness) the very few *nomina nuda* which Macquart and Bigot published. Included, too, in square brackets, are the names of those nominal species which Macquart and Bigot assigned to apparently Tachinid genera, but which are now known to belong to taxa in other families, and also the few Tachinid nominal species which though described from the area covered are now known to have a New World provenance.

All names given in Parts I and II are listed alphabetically in their original combinations, and for each taxon the entry is arranged to show the following information in the sequence indicated:—

Name; author; date and page reference of original publication; status and sex of primary type; authority for lectotype designation (if relevant); data of primary type; type-depository.

Number and sex of paralectotypes (if any), with data and despository.

Explanatory comments and annotations.

The following points should be noted with regard to the foregoing sequence-list of type-information. In a few instances the type-material is lost or has not been accessible, and in the absence of definite information about the number of original specimens it has sometimes been necessary to cite the types as "? holotype or syntypes". Most of the lectotype fixations are new, as indicated by the words "LECTOTYPE" and "by present designation", and a total of 39 lectotypes are newly designated in the paper. The type-data usually amounts to no more than the name of the country or island-group of origin, but if anything more precise is known then the additional information is given: e.g. "AUSTRALIA" if there is no further information, but "QUEENSLAND, Moreton Bay" if the further detail is possible. In a few instances the name of the collector of the type-material is known, and where so this is cited in parentheses and italics after the locality, e.g. "INDIA, Pondicherry (*Perrottet*)". I have often thought it helpful, after citing the type-locality in its modern form, to show between single inverted commas and in parentheses the name of the locality actually cited in the original publication, e.g. "AUSTRALIA ('Nouvelle-Hollande, côte orientale')". If the provenance cited in the original publication appears to be in error, but cannot be proved to be so, then I have indicated this by giving the cited locality in single inverted commas followed by an annotation in square brackets, e.g. "'TASMANIE' [probably in error for New South Wales]".

Almost all of Macquart's type-material is in Paris and London, and all of Bigot's type-material (of Tachinidae) is in London. The Macquart types now in London, and Bigot's own types, formerly were part of Bigot's collection, and though they are now incorporated into the general Diptera collection of the British Museum (Natural History) I have thought it best to indicate that they came from Bigot's collection by adding "(ex coll. Bigot)" after the type-depository. In the case of Macquart's types in Paris I have indicated the serial reference numbers after the type-depository initials. To condense the text the following abbreviations have been used for the type-depositories:

BMNH	British Museum (Natural History), London.
MHN	Musée d'Histoire Naturelle, Lille.
MNHN	Muséum National d'Histoire Naturelle, Paris.

Townsend saw some of Macquart's types in Paris, and apparently some of Bigot's types when the Bigot collection was formerly in the hands of J. E. Collin at Newmarket (see p. 296), and some of these—together with others he had not seen—he referred to in his *Manual of Myiology* (1934-1942, 12 Parts, Itaquaquecetuba), and occasionally in his earlier papers. Unfortunately, several of the specimens referred to by Townsend as "Ht" [= holotype] for various nominal species of Macquart and Bigot are not original type-material at all, while some others are specimens arbitrarily referred to by Townsend as "holotypes" though actually only specimens from syntypic series. In a few cases it happens, however, that Townsend's citation of "Ht" can apply only to one recognizable specimen of the type-series of a particular nominal species and I have then reluctantly accepted Townsend's action as valid fixation of a lectotype (for it provides a restriction of the name to one specimen, even though such specimen was not labelled by Townsend to show its

status). All cases of this kind, and others where Townsend's citations of types were based on faulty recognition of type-material, have been annotated throughout the text.

Lectotypes fixed by Townsend and lectotypes newly designated in the present paper have been appropriately labelled, and all available paralectotypes have also been labelled to show their status.

Finally, it should be explained that this paper deals only with the type-material of the nominal species discussed, and no attempt has been made to assign the species to currently recognized genera or to investigate possible synonymies ; this will be done when the projected regional catalogues are published.

#### ACKNOWLEDGEMENTS

It gives me much pleasure to thank Monsieur L. Matile and Dr L. Tsacas for their generous help during my visit to the Muséum National d'Histoire Naturelle in Paris in September 1969, and to thank Mrs M. E. Crosskey for her invaluable help in taking down copious notes on Macquart's types during this visit.

I am grateful also to Professor R. Defretin, Conservateur of the Musée d'Histoire Naturelle at Lille, for information on specimens in Macquart's collection in that Museum and to Dr Curtis Sabrosky for information on some relevant specimens in the U.S. National Museum, Washington, D.C. For valuable information in reply to enquiries I am much indebted to Monsieur Matile and Dr J. Verbeke.

#### PART I—MACQUART

##### MACQUART'S WORK AND RECOGNITION OF HIS TYPE-MATERIAL

Justin Macquart was born at Hazebrouck (Département du Nord) in northern France in 1778 and died on the 25th November 1855 at Lille, where he had been prominent among the savants for more than fifty years. In 1803, at the age of twenty-five, he was a founder-member of the *Société d'Amateurs des Sciences et Arts de la ville de Lille*, which was later renamed the *Société des Sciences, d'Agriculture et des Arts de Lille*, and in later years he held various offices in this Society including the Presidency ; many of his major works, and virtually all of those concerned with exotic Diptera, were published in the *Mémoires* of the Society. Macquart was largely responsible for the creation of the Musée d'Histoire Naturelle in Lille, of which he was director for many years and where he built up an important insect collection (which was later largely destroyed through neglect). It seems quite certain that Macquart was held in much esteem during his lifetime, most especially among his scientific confrères in Lille, and it is interesting to read the honorific address that was presented to Macquart on the 17th July 1853 to mark the fiftieth anniversary ("jubilé académique") of his entry into the Lille Society (see p. 6 of the *Supplément à l'année 1853 et table générale de la Ire série*, Lille, 1856, published as a separately paginated supplement to the *Mémoires de la Société impériale des Sciences, de l'Agriculture et des Arts de Lille*, Année 1853). An obituary notice of Macquart by the president of the Lille Society can be found in the *Mém. Soc. Sci. Agric. Lille Sér. II*, 3 (1856) : 469, published in 1857.



Before considering Macquart's works some brief mention must be made of discrepancies which exist in the literature concerning Macquart's Christian names (prénoms). Some standard bibliographical and entomological sources cite Macquart's first name as Jean, others as Justin, and others as Pierre-Justin-Marie ; Macquart himself always published only the initial 'J'. Different editions of the French Larousse encyclopaedia cite different names : in the 1873 edition ("*Grand Dictionnaire universel du XIXe siècle*" 10 : 880) the names Pierre-Justin-Marie are given, but in the 1933 edition ("*Larousse du XXe siècle*" 4 : 581) only the prénom Jean is given. I have no completely conclusive evidence about which is correct, and have found no certain explanation for the discrepancies, but I have here accepted as probably correct (and have cited above) the prénom Justin : this is the single name cited by friends and colleagues of Macquart in the *Mémoires* of the Lille Society (mentioned above), and is given for example in the obituary notice of Macquart already mentioned and in a bibliography of Macquart's works published in 1856 (the year after his death) (see pp. 67-68 in the *Supplément à l'année et 1853 table générale de la Ire série* to the *Mém. Soc. imp. Sci. Agric. Lille*, Année 1853) ; these may be considered sufficiently authoritative sources, at least for the purpose of this paper.

Macquart's interest in natural history began at a young age, and while travelling with the French armies as a young man he studied the botany and entomology of the countries that he passed through ; later on, he studied particularly the insects of France and Switzerland and visited Meigen in Germany (in 1840 he personally brought Meigen's collection from Stolberg to Paris). Some of Macquart's earliest published work was on the Orthoptera and Hemiptera, and from time to time he published also on Coleoptera, plants and birds, but it was to the Diptera that he devoted most of his later life's work. His early publications on Diptera comprised monographic works on the flies of northern France, but in the later years of his life Macquart devoted himself more and more to a study of the exotic (i.e. non-French) Diptera, of which material was beginning to accumulate in collections in France (especially in the Natural History Museum in Paris) as a result of the French voyages of the first half of the nineteenth century.

The studies made by Macquart on the "exotic" Diptera culminated in the appearance of his great work, published between 1838 and 1855 in two volumes and five supplements, entitled *Diptères exotiques nouveaux ou peu connus* (the volumes and supplemental parts of this are, for convenience, referred to simply as the *Diptères exotiques* and the *Suppléments* in the discussion which follows). This work contains the descriptions, according to Macquart's (1855 : 30) own count, of 2,300 species of exotic Diptera described by Macquart himself, and has therefore always been an extremely important taxonomic text for students of the Diptera, especially of the non-European forms ; it establishes Macquart as one of the most important dipterists of the nineteenth century, and in many ways as the father of extra-European and tropical dipterology.

Before the work of Macquart only Wiedemann and Robineau-Desvoidy had made extensive contributions to descriptive dipterology for the extra-European parts of the world, but the standard of work attained by these earlier workers was

in the main significantly lower than that attained by Macquart, and Macquart's work in the *Diptères exotiques* and its *Suppléments* represents a real advance in extra-European dipterology when compared to anything that had gone before. It is perhaps true that Wiedemann's specific descriptions are as a rule superior to Macquart's, and sometimes that Robineau-Desvoidy had a better eye for affinity ; but Wiedemann's work shows a slavish adherence to the European genera recognized by Meigen, into which he pressed many curious exotic forms that were really impossible to fit into the framework of European genera. It is one of Macquart's major contributions that he realized that the baffling welter of newly discovered forms coming from the tropics or Australia or South America simply could not be fitted into European genera, or only occasionally could, and that he described many new genera to accommodate them ; today we treat as valid the majority of the genera which Macquart established.

It is easy to fault the *Diptères exotiques* and *Suppléments* on the grounds (relatively rather trivial) that in this work Macquart several times described the same species so that some of his own names are synonyms, or that he occasionally published a name for a new species that is a junior primary homonym of one of his own names. But it is far more important to remember that the work contains standards of taxonomic presentation well above those that had normally obtained in dipterology before his time, and often far higher than that of his contemporaries (e.g. Walker) and many of his later successors (e.g. Bigot or Curran) : even a casual acquaintance with the work shows that in it Macquart provided, for example, keys to all tribes and genera, and diagnoses of all tribes and genera, in a style that would be creditable in modern taxonomy ; furthermore, Macquart, to the best of my knowledge, was the first dipterist who clearly labelled his original specimens of a new species and new genus with "n.sp." or "n.g." suffixed to the names, and this is a striking advance on the very imprecise and casual labelling (or indeed total lack of labelling) that had often characterized the work of earlier dipterists (Macquart's labelling of specimens is considered in more detail later in this section).

Each volume and *Supplément* of the *Diptères exotiques* is copiously illustrated with figures of whole flies and such parts as heads and wings which Macquart drew himself, and the extensiveness of the illustration is another feature of Macquart's work which makes it outstanding for its time. It is true that the figures have a crude look about them to a modern taxonomist's eye, but it has to be borne in mind by anyone inclined to criticize these figures that they were delineated by an elderly or old man (Macquart was 60 years old when the first volume of *Diptères exotiques* was published and 77 years old when the last (fifth) *Supplément* appeared in the year of his death), and that the figures of entire flies with outstretched wings had almost all to be mock-up drawings because few of the actual specimens were set in the postures shown: among the Tachinidae, for instance, of which many were illustrated by Macquart, only some specimens of Rutiliini are actually set with outstretched wings and legs. Despite the rather unnatural appearance of Macquart's figures it is possible to recognize some of the species accurately or to get a shrewd idea of what species Macquart had before him, and when the figures are compared against the types it is the fair degree of accuracy that impresses one (bearing in mind the conditions of the

times)—though undoubtedly the few figures which Wiedemann provided before Macquart's work look more like real flies. In the main we should be appreciative of the very large number of figures which Macquart provided rather than critical of their blemishes.

Most of Macquart's nominal species were described from specimens in the collection of the Muséum National d'Histoire Naturelle in Paris or from the collection of Bigot, and the great majority of the original types still exist in the Paris Museum or (in the case of those from Bigot's collection) in the British Museum (Natural History) in London and the Hope Department of Entomology in the University Museum at Oxford. Many of the original specimens are still in good or fair condition, but others (especially in the Paris collection) are in dreadful condition as the result of neglect at one time or another; undoubtedly Macquart described some species from specimens that were far from perfect at the time of description, but it is equally certain that those types found now to be coated in a brittle deposit or concealed in thick mould must have been in reasonably good condition when Macquart saw them. In addition to describing specimens from the collections of the Paris Museum and of Bigot, Macquart also described some species from specimens that he saw in the collections of other French naturalists, including for example Dejean and Fairmaire, but the types of such species appear never to have been located and must now be considered lost (no Diptera from the collections of Dejean or Fairmaire have been found, so far as I know). There is a possibility that a box of Diptera from Java recently located in the Municipal Museum at Tournai in Belgium contains the original specimens of the Javanese species which Macquart described in the *Suite du 2me Supplément* (commonly called the third Supplement) from material collected by Monsieur Payen, who was administrator of the Museum at Tournai when these species were described: at present, as I have not yet been able to see the material, this is uncertain, and in the text of the present paper where the relevant nominal species are involved the type-material is recorded as "possibly lost". One other collection known to contain Macquart types is that which Macquart formed as a personal collection from specimens given to him and which is now in the Muséum d'Histoire Naturelle at Lille, where it had been neglected for many years after Macquart's death or actually mislaid: when found again in 1899, in its original cartons, Macquart's own collection had suffered serious damage from humidity and *Anthrenus* attacks, and many specimens had been badly damaged or completely destroyed; but the remnants of this collection certainly contain original specimens on which those nominal species are based that Macquart (in *Diptères exotiques* and *Suppléments*) cited as in "Ma collection" or in "Mon cabinet". (Here it may be useful to note that the Diptera section of the Muséum National d'Histoire Naturelle in Paris possesses a manuscript catalogue, prepared by Julien Salmon in 1899, of the Diptera existing in Macquart's own collection in Lille.)

Macquart's types of those species he described from Bigot's collection have been incorporated into the general collection of the British Museum (Natural History) for those families of which the BMNH possesses the Bigot material, but they are left as part of a separate Bigot collection at Oxford for those parts of the Bigot collection possessed by the Hope Department of Entomology. In the Muséum



National d'Histoire Naturelle in Paris the material worked upon and described by Macquart is housed as a "Macquart collection" separate from the general Diptera collection, and is contained in 87 serially numbered hinge-lid glass-topped boxes, with the species serially numbered and arranged together by zoogeographical region ; the different regions are indicated by a colour code shown on the ends of the boxes and on circular accession labels attached to most of the specimens, in which yellow denotes European and Oriental, blue denotes African, mauve-pink denotes Australasian and green denotes American material. The circular labels on the specimens have the colour on one side only, and the plain white side bears figures in faded ink which indicate a serial number given to the collection of which the specimens formed part, followed by the year of accession (last two digits only) ; for example, a circular accession label on a Macquart specimen in the MNHN collection which is mauve-pink on one side and has the figures "13 44" on the other indicates an Australasian specimen of the thirteenth collection registered in the accessions ledger in the year 1844. The accession labels are of great importance for the recognition of the true type-specimens, as discussed further below.

Recognition of the original type-specimens of Macquart's species is normally not difficult, but is complicated by the fact that Macquart often identified specimens that were collected or studied after the time of the original descriptions and added them to the Paris Museum collection so that they stood together with the original (type) specimens ; because of this, it is often the case that not all of the specimens standing in the MNHN collection under a particular name are actually type-specimens, and it is then necessary to distinguish the true types from the later material by taking into account not only the handwritten labels of Macquart but also the accession date labels.

Macquart's handwriting is easily recognized (see Plate 1, A-F). He was extremely punctilious in labelling specimens with both a generic and specific name, and (at least from the time of the first *Supplément*, 1846) at indicating whether the specimen labelled represented a new species or new genus and species. The label for a new species nearly always bears the suffix "n.sp." after the name (Plate 1, B), or occasionally the suffix "nov.sp." (Plate 1, C), and the label for both a new genus and a new species normally has the suffix "n.g., n.sp." after the name (Plate 1, A) ; labels with suffixes of this kind always indicate that the specimens so labelled are types. But from a study of Macquart's material it is evident that up to the time of the second volume of *Diptères exotiques* in 1843 Macquart had not yet formed a consistent habit of adding the suffixes, and most of the types of his species described before 1843 (and some of those described in this year in *Diptères exotiques*, second volume) have labels which show only the generic and specific name ; in these instances, the evidence of type status rests on the finding of specimens bearing Macquart's own name label in conjunction with agreement with description, and other ancillary evidence (e.g. no discrepancy with accession date labels).

Macquart only labelled one specimen of a new nominal species with the name and suffix, though he often had more than one original specimen, and it is often necessary to determine whether some or all of a series of specimens standing under a particular name are syntypes. Macquart himself (unlike his predecessors and contemporaries,



and unlike too many of his successors) had seen the need to distinguish clearly the original specimens of a species from those identified later, and many specimens exist in the MNHN and BMNH collections which bear Macquart's determination labels that can be easily distinguished from his labels on original types: later determination labels lack the suffixes but give the binomen and author (see Plate 1, F), and frequently also indicate the *Supplément* in which the species was described and the provenance of the specimen labelled; for example, a typical later identification label written by Macquart reads "*Gonia heterocera* ♀ Macq. 1. supp. Tasm.", this indicating that the species was described earlier in the first *Supplément* and that the specimen came from Tasmania; labels of this kind at once eliminate the specimens so labelled from the type-series. Other specimens, in the MNHN collection, though not bearing later determination labels, can often be eliminated on the evidence from their accession labels: specimens which bear circular accession labels indicating that they were registered as part of the MNHN collection in 1847 (e.g. those with accession number "4 47") are not type-specimens of nominal species described earlier than this date, and it is certain also that no specimens with 1846 registrations (e.g. those with accession number "4 46") were described in that year (i.e. specimens that are types of species described in 1846 in the first *Supplément* always have accession numbers earlier than this year, normally 1844). The accession dates are most helpful in determining the type or non-type status of specimens, because of the close link with the dates of publication of the *Diptères exotiques* and the *Suppléments*: specimens registered in 1844 were not seen by Macquart earlier than this date and cannot therefore be described in *Diptères exotiques*, Volume 2, published in 1843, but are frequently described in the first *Supplément* of 1846: specimens registered in 1846 and 1847 are not involved in *Suppléments* earlier than 1847 and 1848 respectively, and some were not described until the fourth *Supplément* (1850/1851) or the fifth *Supplément* (1855); not all specimens from the 1844 registrations were covered by Macquart in the first *Supplément*, and many of them were not described until later *Suppléments*. The accession year numbers are always indicative of the earliest possible date at which a specimen could have been described, and invaluable for determining syntype status in doubtful cases.

In the present work any specimen standing in the MNHN collection with Macquart's originally-labelled specimen has been accepted as a syntype provided that it agrees with the description and that its accession number makes it eligible for admission as an original specimen. Macquart did not indicate in publication the number of specimens available to him (though in a very few instances it can be deduced from some statement attached to the description) and all specimens that could have been seen by him at the time of description are acceptable as part of the type-series if there is no contrary evidence. The lectotypes designated, and the paralectotypes, have been labelled to show their status. Macquart rarely mistook the sex of his specimens of Tachinidae, but any discrepancies between the published sex and the actual sex of his type-specimens are annotated in the text when relevant.

The majority of Macquart's types that formed part of Bigot's collection are holotypes which are easily recognized as such by bearing Macquart's original name labels, but a few of the species described from Bigot's collection are based on syn-

types, though they do not in this case have accession labels from which deductions about status can be made. The syntypic status has to be assumed from the finding of two or more specimens standing together which all answer to the original description and of which one bears Macquart's label. Bigot sometimes removed Macquart's original name labels from the specimens and gummed them on to his own rectangular black-edged card cabinet labels (see Plate 1, E), often adding information on locality and Macquart's authorship in his own handwriting; he did this especially among the Rutiliini (Tachinidae), and the labels from several of Macquart's Rutiliine primary types are mounted in this way (as in the case of *Rutilia fulgida* shown in Plate 1, E).

Macquart nearly always recorded in the *Diptères exotiques* and *Suppléments* the actual collection (depository) which contained the specimens on which each nominal species was based, and these recorded depositories assist greatly in determining whether any specimen ought or ought not to be considered an original type (though other evidence is normally available also). The great majority of specimens are recorded as being in "Muséum", which refers to the Muséum National d'Histoire Naturelle, and many others are cited as being in the collection of "M. Bigot"; almost always the cited depository is found to be correct, for it still contains the material referred to, but there are a very few cases of discrepancy. For a few species the cited depository is the collection not of the Paris Museum or of Bigot but of another naturalist or collector, but it appears that for all or nearly all of these the types are lost (or at least have never been located) and are now unlikely to be found. Reference has been made above to Macquart's method of citing specimens in his own collection in Lille by the use of the words "Ma collection" or "Mon cabinet".

The exact origins of the specimens with which Macquart worked, that is to say the type-localities of the nominal species that he described, are sometimes doubtful as the localities were only imprecisely noted by the expedition workers who collected the specimens. This is specially true of Australia, from which specimens may be cited in the *Diptères exotiques* and *Suppléments* as "De la Nouvelle-Hollande" (sometimes with the addition of "côte orientale"), or "De la Tasmanie" or even as "De l'Océanie"; it is necessary to be cautious about attributing too definite a provenance to Macquart's Australian species, though the following information derived from Macquart's Australian Tachinidae and their accession labelling is believed to be a useful guide to the type-localities of his Australian species for which the type-material is in the MNHN, Paris, collection.

Four accession reference numbers are found on the Australian Tachinid types of Macquart in Paris (and probably are the normal accession numbers to be found on Australian specimens of other families); they are "13 44", "4 46", "2 47" and "3 47". Species whose types have the "13 44" reference were almost all described by Macquart as being from Tasmania, though a few were recorded as from Oceania: these appear on present evidence to be correctly recorded from Tasmania, and those recorded as from "Océanie" are also probably from Tasmania (they are certainly from mainland Australia if not from Tasmania). Species whose types have the "4 46" reference were described from Tasmania, but many of them appear not to have

been found in Tasmania in recent collecting whereas they are known from eastern mainland Australia : these appear on present evidence to be mainly wrongly recorded from Tasmania, though possibly some may occur there. Species whose types have the "2 47" reference were recorded by Macquart as coming from the east coast of Australia ("Nouvelle-Hollande, côte orientale") and all evidence suggests that this is correct, New South Wales being the most likely provenance though possibly Queensland for some species. Finally, species whose types have the "3 47" reference were described from Tasmania : later knowledge of several of these species suggests that the eastern Australian mainland (especially New South Wales) is a more probable provenance, though the distribution ranges might include Tasmania and this could be the correct type-locality for at least some of the types bearing the "3 47" label.

MACQUART'S TYPE-MATERIAL OF AUSTRALASIAN, ORIENTAL AND ETHIOPIAN  
TACHINIDAE

[Note : the following list includes in square brackets those nominal species which are *not* Tachinidae but which might be assumed to belong to this family because of their original generic assignments by Macquart, and those Tachinidae which were wrongly recorded from the Old World areas covered and are now known to be American. Names that are not included in square brackets but are printed in non-bold italic type are unavailable or are junior primary homonyms.]

***Amphibolia valentina*** Macquart, 1843 : 279 (122). ? holotype or syntypes ♂, AUSTRALIA ('Nouvelle-Hollande'): MHN, Lille (Macquart coll., box G.19).

In the original description Macquart stated that the material was in his personal collection ("Mon cabinet") and not in that of the Paris Museum. Macquart's own collection (what little remains of it) is in the Musée d'Histoire Naturelle at Lille and contains four specimens standing under the name *Amphibolia valentina*, of which one or some must be original type-material; the specimens cannot be loaned, and as I have not yet been able to see them it is not possible to say at present which specimens are types and whether all are males.

Macquart's material in Paris (MNHN) contains twelve specimens (6 ♂, 6 ♀) standing under the name *valentina*, but these have accession dates later than the original publication and none of them are type-specimens; they represent later material determined by Macquart, as do a ♂ and a ♀ from Bigot's collection in BMNH which bear identification labels in Macquart's writing.

***Apatemyia longipes*** Macquart, 1846 : 325 (197). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2379).

Paralectotypes: 4 ♂, 2 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Apatemyia longipes* Macq. n.sp." and is in poor condition with both mid legs missing; both it and the paralectotypes (also in bad condition, some lacking the abdomen) have accession labels "13 44". Standing with the type-material are two ♀ specimens with accession labels "3 47" without type-status.

As the type-material contains more than one male the citations of "Male Ht" by Townsend (1932 : 37, 1938 : 317) do not provide a valid fixation of lectotype for *longipes*.

***Aprotheca rufipes*** Macquart, 1851 : 149 (176). Lectotype ♂, by fixation of Townsend (1932 : 49), TASMANIA: MNHN, Paris (No. 2266).

Paralectotype: 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Aprotheca rufipes* Macq. n.g., n.sp. Tasm." and is



in poor condition with both hind legs missing; the paralectotype ♀ is in appalling condition and probably mis-associated with the lectotype.

Townsend (1932 : 49, 1941 : 87) referred to the male syntype as "Ht" (= holotype) and to the female syntype as "At" (= allotype), and thereby provided a valid restriction of the male as lectotype.

***Aulacephala maculithorax*** Macquart, 1851 : 139 (166). LECTOTYPE ♀, by present designation, MADAGASCAR, 1832 (*Houdot*): MNHN, Paris (No. 927).

Paralectotype: 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Aulacephala maculithorax* ♀. Macq. n.g., n.sp.", and both it and the paralectotype have an accession label "86 30"; both specimens in poor condition, mouldy and with some legs missing.

Townsend's (1938 : 256) statement that the type is in Lille or lost is in error.

***Blepharella lateralis*** Macquart, 1851 : 177 (204). Holotype ♂, INDIA, Pondicherry (*Perrotet*): MNHN, Paris (No. 670).

The holotype bears Macquart's label "*Blepharella lateralis* ♂. n.g., n.sp. Macq." and is in fair condition except for loss of left wing; the pin pierces the prosternum, but even so this is clearly bare (mentioned as this is an exceptional feature in Sturmiines).

***Blepharipeza goniaeformis*** Macquart, 1846 : 285 (157). Lectotype ♀, by fixation of Townsend (1932 : 50), TASMANIA: MNHN, Paris (No. 2274).

Paralectotype: 1 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Blepharipeza goniaeformis* Macq. n.sp." and is in appalling condition, all that remains being the eaten out shells of the head and thorax, both wings, and one complete leg. Both lectotype and paralectotype have accession labels "13 44", and the male paralectotype is mis-associated with the lectotype.

It is very regrettable that Townsend (1932 : 50, 1933 : 472), having seen that the male and female syntypes of *goniaeformis* in Paris Museum were wrongly associated, should have restricted the name to the female and then based his genus *Gonanamastax* Townsend, 1933, on the specimen; the male syntype is obviously a specimen of *Blepharipa* Rondani and is in much better condition than the female selected by Townsend, which he himself pointed out lacks the abdomen. However, Townsend has provided a technically valid restriction of the name *goniaeformis* to the female and his action, though ill advised, must be accepted as providing a lectotype fixation which in turn determines the characters of *Gonanamastax* Townsend.

The BMNH contains a female specimen from Bigot's collection with Bigot's label as "*B. goniaeformis*" but this specimen is not a type.

***Calliphora rufiventris*** Macquart, 1847 : 98 (82). Holotype ♀, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Calliphora rufiventris*. ♀ n.sp. Macq." and is in bad condition; all legs are missing, the left wing missing, the abdomen and right wing damaged and there is some mould.

This is a Tachinid, not Calliphorid, and will be generically assigned in a later work.

***Chetogaster violacea*** Macquart, 1851 : 198 (225). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2336).

The holotype bears Macquart's label "*Chetogaster violacea*, ♂. Macq. n.g., n.sp." and an accession label "2 47", also a white rectangular ink label reading "1090", and is in good condition.

***Chlorogaster tasmanensis*** Macquart, 1851 : 157 (184). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2273).

Paralectotypes: 2 ♂, 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Chlorogaster tasmanensis* ♂♀ Macq. n.g., n.sp." and an accession label "3 47", and is in good condition. The paralectotypes bear accession labels "4 46" and one of the males is concealed in mould.



Townsend (1932 : 45, 1940 : 159) referred to a "Male Ht" for *tasmanensis* but as there are three original male syntypes this is not a valid lectotype fixation.

***Chrysosoma flaviceps*** Macquart, 1851 : 158 (185). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2294)

The holotype bears Macquart's label "*Chrysosoma flaviceps* ♂. Macq., n.sp." and an accession label "2 47"; it is in fair condition except for a hole in the thorax and the head slightly crushed.

Townsend (1939a : 10) gave the type-location as "Paris or Lille" and the type-locality as "Brisbane, Queensland". The holotype is in Paris, and I know of no evidence that it came from Brisbane; this statement of Townsend is apparently mere assumption, probably derived from Macquart's citation of the "côte orientale" of Australia.

[*Clytia senegalensis* Macquart, 1843 : 221 (64). Not Tachinidae: belongs in Calliphoridae, tribe Rhiniini, genus apparently *Rhyncomya* Robineau-Desvoidy (syntype ♂ and syntype ♀ in MNHN, Paris, ref. no. 939, examined, ♂ syntype with Villeneuve determination label as *Rhyncomya*).]

***Degeeria albiceps*** Macquart, 1851 : 175 (202). Holotype ♀, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Degeeria albiceps* ♀. Macq. n.sp." and is in extremely bad condition; all mid and hind legs lost, thorax pierced by enormous large-headed pin through one side and out of the opposite supra-alar area, wings damaged, chaetotaxy rubbed. Sufficient remains to be certain, however, that *albiceps* belongs to a genus of the Campyloche-tini.

***Degeeria australis*** Macquart, 1847 : 84 (68). Holotype ♀, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Degeeria australis* n.sp. Macq. ♀"; it is in bad condition, head slightly crushed, large hole in scutellar region, left fore and mid legs lost and antennae lost, apical half of right wing missing.

***Degeeria lateralis*** Macquart, 1851 : 176 (203). Holotype ♂, TASMANIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2293).

The holotype bears Macquart's label "*Degeeria lateralis* ♂. Macq. n.sp. Tasm." and an accession label "13 44". The condition is dreadful, entire specimen coated in a brittle deposit and thickly covered with mould, only one wing remaining.

Tasmania is here accepted as type-locality because the word "Tasm." appears on Macquart's own label, though the original description cited Oceania, and because the "13 44" accession reference signifies a Tasmanian origin.

The name is a junior primary homonym of *Degeeria lateralis* Macquart, 1848 (*Mém. Soc. Sci. Agric. Lille* 1847 : 208; *Dipt. exot.* 3 : 48), but no replacement name is proposed at the present time. The senior homonym applies to a valid North American species of *Metopia* Meigen in the Sarcophagidae and not to a Tachinid (see Sabrosky & Arnaud, 1965 : 937).

***Dexia appendiculata*** Macquart, 1851 : 202 (229). Holotype ♂, TASMANIA: MNHN, Paris (No. 2344).

The holotype bears Macquart's label "*Dexia appendiculata* Macq. n.sp.", an accession label "4 46", and a rectangular white label with "1112" in ink. Condition fairly good.

***Dexia brunnicornis*** Macquart, 1843 : 243 (86). Holotype ♂, LA RÉUNION ('l'île Bourbon'): MNHN, Paris (No. 941).

The holotype bears a label in Macquart's writing "*Dexia brunnicornis*", a circular (apparently accession) label "86.3117" (the meaning of these figures not clear), and a rectangular label in faded ink "194.bis". The condition is fair, some dirt and rubbing, wings frayed, large hole in right base of abdomen.

***Dexia javanensis*** Macquart, 1835 : 214. Holotype ♂, JAVA: not located, possibly lost.

Macquart described *Dexia javanensis* from a specimen which he stated to be from the

"collection de M. Robyns de Bruxelles". The Robyns collection was bought by the Institut Royal des Sciences Naturelles de Belgique (as it is now called) in 1856, but none of the entomologists working at this Institute in Brussels during this century have been able to trace the collection (Verbeke, personal communication), and the type-material of *javanensis* is therefore possibly lost.

***Dexia longipes*** Macquart, 1846 : 315 (187). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2341).

Paralectotypes: 3 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Dexia longipes* ♂. Macq. n.sp." and is in good condition. Two of the ♂ paralectotypes are mis-associated with the lectotype, and belong to two different allied species.

Standing under the name *longipes* with the original type-material in MNHN there are four other specimens, two females and two males, the males differing from the syntypes by having the legs all black; these specimens are not original material, but are later material determined by Macquart and mentioned by him in the 3<sup>e</sup> *Supplément* (1848 : 212-213 (52-53)); the smaller of the two females has Macquart's determination label reading "*Dexia longipes*. ♀. Macq. i. supp."

For some inexplicable reason Townsend (1932 : 37, 1938 : 343) referred to a specimen in Westermann's collection in Copenhagen as the male holotype, but there is no justification for this. None of Macquart's types are in Copenhagen, the original description of *longipes* indicated that the material was in Paris Museum, and the type-material is still present in Paris. It is puzzling why Townsend overlooked *longipes* when he studied the Macquart collection in Paris, and also why he did not realize that the label on the specimen in Copenhagen (quoted by Townsend, 1932 : 37, as "*Dexia longipes* Macq. Diemens Land: Bigot") was so obviously not an original Macquart label.

***Dexia punctipennis*** Macquart, 1846 : 315 (187). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Dexia punctipennis* ♂. Macq. n.sp." and is in poor condition; the specimen is very dirty with much mould, scutum crushed, right wing and right mid and hind legs lost, apices of left mid and hind tarsi missing.

***Dexia rubricarinata*** Macquart, 1846 : 315 (187). Holotype ♂, TASMANIA: MNHN, Paris (No. 2342).

The holotype bears Macquart's label "*Dexia rubricarinata* Macq., n.sp." and an accession label "13 44"; it is in poor condition, dirty, abdomen greasy, thorax crushed, both hind legs missing.

There is a female specimen in extremely bad condition standing with the holotype, but this specimen has no type-status.

***Dexia tessellata*** Macquart, 1851 : 202 (229). Holotype ♀, TASMANIA: MNHN, Paris (No. 2345).

The holotype bears Macquart's label "*Dexia tessellata* ♀. Macq. n.sp.", an accession label "3 47", and a rectangular white label with the ink figures "59"; the condition is poor, scutum crushed, both mid legs and one hind leg missing, one fore leg and most of the tarsus of remaining hind leg also lost, but head and wings good.

***Dexia testaceicornis*** Macquart, 1851 : 201 (228). Holotype ♂, TASMANIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2343).

The holotype bears Macquart's label "*Dexia testaceicornis* ♂. Macq. n.sp." and an accession label "13 44"; condition extremely bad, head, thorax and fore legs enmeshed in fungal growth, one mid leg and both hind legs missing.

Though published as from Oceania the actual type-locality is Tasmania, as indicated on a label below the specimen in the Macquart collection; the holotype has the same accession reference as *Degeeria lateralis* Macquart, 1851 (see above), which is also from Tasmania though recorded as from Oceania.

***Dexia triquetra*** Macquart, 1843 : 243 (86). Holotype ♂, LA RÉUNION ('île Bourbon'): MNHN, Paris (No. 942).

The holotype bears a label in Macquart's writing "D. triquetra", a circular (apparently accession) label "86.3117" (the meaning of these figures not clear), and a rectangular label in faded ink "156". The left mid and hind legs and the left wing are missing, but the condition otherwise very good.

This species was described on the same page as *Dexia brunnicornis* (q.v., above) and the two types were evidently collected on La Réunion during the same expedition. Each bears an accession (or apparently an accession) label which appears to read "86.3117", though I am not fully certain that I have read the somewhat illegible figures correctly and am uncertain what they signify. Macquart's own label on *triquetra* holotype is more cryptic than usual, with the generic name abbreviated.

***Diaphania ruficornis*** Macquart, 1851 : 193 (220). Holotype ♂, TASMANIA: MNHN, Paris (No. 2331).

The holotype bears Macquart's label "Diaphania ruficornis. ♂. Macq. n.sp.", and an accession label "3 47"; the condition is good except for loss of both third antennal segments.

A female specimen stands with the holotype but it has no type-status. This is certain because in the original description Macquart stated "Je n'ai observé qu'un seul individu mâle et pas de femelle".

***Diaphania testacea*** Macquart, 1843 : 278 (121). ? holotype or syntypes ♂, AUSTRALIA ('Nouvelle-Hollande'): MHN, Lille (Macquart coll., box G.19).

In the original description Macquart stated that the material was in his personal collection ("Ma collection") and not in that of the Paris Museum. Macquart's own collection (what little remains of it) is in the Musée d'Histoire Naturelle at Lille and contains ten specimens standing under the name *Diaphania testacea*, of which one or some must be original type-material; the specimens cannot be loaned, and as I have not yet been able to see them it is not possible to say at present which specimens are types and whether all are males. According to a label with the specimens in Lille some of them are from "Van Diemen" (i.e. Tasmania) and these would not be original syntypes.

Macquart's material in Paris (MNHN) contains six specimens (3 ♂, 3 ♀) standing under the name *testacea*, but these have accession dates later than the original publication and none of them are type-specimens; they are later material identified by Macquart, and one of the males has Macquart's determination label reading "Diaphania testacea. ♂. Macq."

***Echinomyia rufoanalis*** Macquart, 1851 : 142 (169). Lectotype ♂, by designation of Crosskey (1967b : 103), INDIA ('Indes orientales'): BMNH, London (ex coll. Bigot).

The lectotype bears Macquart's label "Echinomyia rufo-analis ♂. Macq. n.sp." and is in fair condition; the abdomen and thorax are very rubbed, hole at base of scutellum, both hind legs missing.

Macquart described *rufoanalis* from two male syntypes ("Des deux individus ♂ observés, l'un a le duvet de la face et du thorax blanc, l'autre d'un blanc jaunâtre") but only the lectotype specimen has been located. The other specimen (paralectotype) must be presumed lost. The type-locality is certainly India and not East Indies, because as shown by Crosskey (1967b : 102) the name *rufoanalis* applies to a species of *Servillia* from Himalayan India.

***Elomyia marginata*** Macquart, 1851 : 188 (215). ? holotype or syntypes ♂, SENEGAL: not located, presumed lost.

The MNHN, Paris, collections and indexes contain no references to this species, and my own search in the Paris collections revealed no trace of the type(s), and the type-material is almost certainly lost. Macquart recorded in the original description that he received the material from M. de Léséleur, to whom it might have been returned, but it seems unlikely that it will ever be found.

***Eurigaster lateralis*** Macquart, 1843 : 215 (58). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande') MNHN, Paris (No. 937).



The holotype bears a name label "Eurigaster lateralis" in Macquart's writing, and two blue printed labels reading, respectively, "Muséum Paris, Ile Maurice" and "Museum Paris Col. Guérin-Meneville"; it is in excellent condition except for loss of one mid leg.

Macquart, in the original description, attributed this name to Guérin-Méneville and cited the type-locality as 'Nouvelle-Hollande' (i.e. Australia); however, the name was published by Macquart and not by Guérin-Méneville, and authorship attributes to Macquart. The type-locality of Australia cited by Macquart is accepted as correct, because *lateralis* is a Winthemiine of which other material has been seen from Australia, but it should be noted that a printed label attached to the holotype indicates "Ile Maurice" (i.e. Mauritius) as the locality; it is believed that *Eurigaster lateralis* holotype (MNH number 937) must at some time have been labelled in error, and that it is by mistake that it is still to be found in the African material (and not among the Australian material) in the Macquart collection in Paris.

***Exechopalpus rufipalpus*** Macquart, 1847 : 92 (76). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Exechopalpus rufipalpus. ♂ n.g., n.sp. Macq" and is in poor condition, dirty, much mould, the right mid and left hind legs missing and the chaetotaxy rubbed; the enormously elongated and projecting palpi (to which Macquart's generic name *Exechopalpus* refers) are, however, both present on the type.

***Exorista auriceps*** Macquart, 1851 : 158 (185). Holotype ♂, TASMANIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2276).

The holotype bears Macquart's label "Exorista auriceps. ♂. Macq. n.sp. Ocean" and an accession label "13 44", and is in good condition except for a few threads of mould on the abdomen.

Macquart's description and label indicate Oceania as type-locality but Tasmania is the provenance indicated by the "13 44" reference number.

***Exorista dispar*** Macquart, 1851 : 159 (186). LECTOTYPE ♂, by present designation, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2277).

Paralectotypes: 1 ♂, 3 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Exorista dispar. ♀♀ Macq. n.sp. n.holl." and an accession label "2 47", and is in good condition. The ♂ paralectotype and one of the ♀ paralectotypes are correctly associated with the lectotype, but the other two ♀ paralectotypes (which bear accession labels "13 44" and "3 47" respectively) are specimens of the genus *Winthemia* R.-D. and are wrongly associated with the lectotype. It should be noted that all five specimens standing under the name *dispar* in the MNHN collection have been accepted as syntypes, because Macquart described the species from both sexes, and there is no evidence that any of the specimens were received later than the date of description.

Mesnil (1944 : 27) referred to "die australische Art *C. dispar* Macq. ♂, deren Type im Pariser Museum ist" when he described the genus *Carcelimyia* Mesnil, based on *dispar*, but his statement does not restrict the name to a single recognizable specimen from the type-series and therefore does not constitute valid lectotype fixation. The lectotype is therefore here newly designated.

***Exorista diversicolor*** Macquart, 1847 : 83 (67). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Exorista diversicolor. ♂ n. sp. Macq." and is in good condition except for the loss of both mid legs, most of the right wing and a few setae.

***Exorista flaviceps*** Macquart, 1847 : 83 (67). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Exorista flaviceps. n.sp. Macq." and is in very good condition except for loss of the left mid leg and slight greasing of the thorax.

***Exorista flavipes*** Macquart, 1851 : 160 (187). Holotype ♀, TASMANIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2278).



The holotype bears Macquart's label "Exorista flavipes. ♀. Macq. n.sp. Oceanie" and an accession label "13 44", and is in good condition. The holotype belongs to a hairy-eyed species of the *Apatemyia* Macquart and *Toxocnemis* Macquart complex, which is confined to Australia and Tasmania, and the type-locality is here accepted as Tasmania because of the "13 44" accession reference.

**Exorista lata** Macquart, 1848 : 207 (47). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Exorista lata. ♂. nov.sp."; the condition is fair, slightly dirty with mould, large hole in abdomen and depression in scutellum, right mid and left hind legs missing.

**Exorista marginata** Macquart, 1851 : 161 (188). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2281).

Paralectotypes: 4 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Exorista marginata ♂. Macq. n.sp. Tasm." and an accession label "4 46"; the condition is fair, some mould and abdomen greasy, thorax badly damaged around the pin. The paralectotypes are all conspecific with the lectotype.

Mesnil (1949 : 82) placed *marginata* in the genus *Winthemia* R.-D. and the name as a synonym of *W. brevisetosa* (Macquart), remarking that "Die beiden Macquartschen Typen befinden sich im Pariser Museum"; this statement does not provide a valid lectotype fixation for *marginata*.

**Exorista rufomaculata** Macquart, 1851 : 160 (187). Holotype ♂, TASMANIA: MNHN, Paris (No. 2280).

The holotype bears Macquart's label "Exorista rufomaculata ♂. Macq. n.sp. Tasm." and an accession label "3 47"; the condition is bad, whole specimen very dirty with mould and greasy, one fore leg and both mid legs missing.

**Exorista translucens** Macquart, 1851 : 162 (189). Holotype ♂, TASMANIA: MNHN, Paris (No. 2282).

The holotype bears Macquart's label "Exorista translucens. ♂. Macq. n.sp. Tasm." and an accession label "3 47", and is in good condition except for slight mould and loss of one mid leg.

*Exorista varipes* Macquart. – See *Masicera varipes*.

**Gonia heterocera** Macquart, 1846 : 281 (153). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2267).

Paralectotypes: 2 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Gonia heterocera ♂. Macq. n.sp." and an accession label "13 44", and is in very good condition except for loss of one hind leg and a little dirtiness. The ♂ paralectotypes are correctly associated with the lectotype, and also bear accession labels "13 44".

Standing with the type-material in MNHN are two female specimens (one without the abdomen) from Tasmania, but though Macquart described the female sex of *heterocera* these specimens are not original syntypes; they bear Macquart's labels reading, respectively "Gonia heterocera ♀ Macq. 1. suppl Tasm." and "Gonia heterocera ♀. Macq. sup." and are clearly therefore later determined material.

Macquart's original description of *heterocera* is unusual in that a description is given first of a female specimen cited as "De la Nouvelle-Hollande. Collection de M. le marquis Spinola" and this is followed by a description in larger type of some males cited as "De la Tasmanie. Muséum". However, as Macquart does not express any doubts about the correctness of the association of the Tasmanian males with Spinola's specimen of the female from Australia, all the specimens are syntypes and one of the original males has therefore been here designated as lectotype. It should be noted, however, that Townsend (1932 : 50, 1941 : 75) cited a female specimen in Paris from Tasmania at "Ht" [= holotype], but he did not provide a

valid fixation of a lectotype thereby, because there are two females from Tasmania in the MNHN collection and neither of them is an original type-specimen. The original female syntype from Australia described from Spinola's collection is not in Paris, and is almost certainly lost.

Townsend (1932 : 50) cited a "female Pt [i.e. paratype] in Lima" of *Gonia heterocera*, and later (Townsend, 1941 : 75) cited the same specimen as being in Washington. This specimen (which is still present in the United States National Museum, Washington D.C.) was obtained by Townsend from MNHN, Paris, and placed in his Tachinid genotype collection in Lima, Peru, before this was moved to Washington; it is, as Townsend stated, a ♀, but it bears a circular pink-backed Paris Museum accession label reading "3 47", and this indicates beyond doubt that it was not an original type-specimen (syntype); it has, in fact, no type-status, and was clearly added to Macquart's collection at some time after the original description. The specimen has a handwritten label by Townsend indicating that in his opinion it belongs to "*Tritaxys australis* Mq (*Gonia heterocera* Mq)", but Townsend is in error in this synonymy (published by him, 1941 : 75).

The BMNH contains three specimens of *heterocera* from Bigot's collection (though probably not this species) of which one has Macquart's label "*Gonia heterocera* ♂. Macq." (though it is actually a female); the specimens are not type-material.

***Gonia javana*** Macquart, 1848 : 203 (43). ? holotype or syntypes ♂, JAVA: not located, possibly lost.

Macquart stated that this was described "De Java. Collection de M. Payen". I have been unable to locate the type-material of *javana* and it is possibly lost.

***Gonia javana*** Macquart, 1851 : 151 (178). LECTOTYPE ♂, by present designation, JAVA: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♀, same data as lectotype (BMNH).

The lectotype bears Macquart's label "*Gonia javana* ♂. M. n.sp", and is in good condition except for some damage to the scutum and loss of the right mid leg.

In the original description Macquart gave the depository as "Muséum" (i.e. MNHN, Paris), but it is considered that this is an error and that Macquart should have cited "M. Bigot" in his usual style for material received from Bigot. The MNHN collection has never, so far as known, contained a specimen of *Gonia javana* and though a reference (No. 667) occurs to the species in the Oriental box No. 17 of the Macquart collection and in the typescript catalogue to that collection, these entries are based on Macquart's "Muséum" statement only. On the other hand, the Bigot collection (now incorporated in BMNH, London) contains two specimens (a ♂ and a ♀) fitting Macquart's original description and of which the ♂ bears an original label (cited above) in Macquart's writing as *G. javana*; without doubt the specimens in the Bigot collection were the original material. Though Macquart mentioned only "♂" in the description, I have accepted the ♀ specimen standing with the ♂ as an original syntype because it is mounted exactly similarly to the ♂, the female sex is extremely similar to the male, and the probability is that both specimens were together when Macquart made his description.

***Gonia javana*** Macquart, 1851, is a junior primary homonym of *G. javana* Macquart, 1848 (above). Wulp (1896 : 127) noted the homonymy with the statement "Nomen bis lectum" without providing a new name, and de Meijere (1924 : 222) published the replacement name *braueri*, at the same time assigning the species to the genus *Goniophana* Brauer & Bergestamm. Thus the lectotype of *javana* Macquart, 1851, is type of *Goniophana braueri* de Meijere, 1924.

***Gonia rubriventris*** Macquart, 1851 : 150 (177). Holotype ♀, SOUTH AFRICA, Cape of Good Hope: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Gonia rubriventris* ♀. Macq. n.sp." and is in poor condition, specimen dirty and chaetotaxy rubbed, scutum partly obscured by glue, left fore leg and some of the tarsi missing.

*Gonia rufitibialis* Macquart, 1851 : 151 (178). Holotype ♀, INDIA, Pondicherry (*Perrottet*): MNHN, Paris (No. 666).

The holotype bears Macquart's label "*Gonia rufitibialis* ♀. Macq. n.sp." and an accession label "2906 40"; it is in fair condition only, some mould and all right legs missing.

*Grapholostylum dorsomaculatum* Macquart, 1851 : 196 (223). LECTOTYPE ♂, by present designation, 'TASMANIE' [probably in error for New South Wales]: MNHN, Paris (No. 2334).

Paralectotypes: 2 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Grapholostylum dorso-maculatum* ♂. Macq. n.g., n.sp." and an accession label "4 46", and is in very good condition. The two paralectotypes are conspecific with the lectotype and they also bear the accession number "4 46".

Townsend (1938 : 416) referred to a specimen in Bigot's collection as the holotype of *dorsomaculatum* with the statement "(Ht from Australia, in Newmarket)"; I have not found a specimen named as *dorsomaculatum* among Bigot's material of Rutiliini (to which tribe *Grapholostylum* belongs), but the specimen seen by Townsend, or at least recorded by him, cannot have been a type-specimen. Lectotype designation from the true type-material in Paris is therefore here necessary.

Recent knowledge of this species from collecting in Australia suggests that the true type-locality is probably New South Wales and not Tasmania (as cited by Macquart).

[*Gymnostylia quadrimaculata* Macquart, 1851 : 200 (227) (as *Gymnostylia*, 4 *maculata*). Recorded provenance "Triton Bay" (Indonesian New Guinea) undoubtedly in error. ♂ holotype assignable to *Dasyuromyia* or closely allied genus from southern Neotropical Region.]

*Gymnostylia setosa* Macquart, 1843 : 245 (88). Syntypes ♂ and ♀, SOUTH AFRICA ('Du Cap'): lost.

Macquart described this species from male and female specimens stated to be in Serville's collection. No type-material exists in the MNHN, Paris, and is considered to be lost.

The BMNH, London, collection contains a male specimen in very bad condition from Bigot's collection which bears an identification label in Macquart writing which reads "*Gymnostylia setosa* ♂. Macq."; although it is from the Cape of Good Hope (and labelled "Cap. b. Spe." by Bigot) it is almost certainly a specimen that was identified by Macquart at some time after the original description of *G. setosa*, and therefore not an original type-specimen. Brauer (1898 : 511) referred to this dirty and damaged specimen from Bigot's collection as a ♀ (though it is male, as Macquart's own label correctly records), and compared it to the Australian Rutiliini, relating it to *Paramphibolia assimilis* (Macquart); actually it is a *Billaea* s.l. species, as van Emden (1947 : 648) recognized.

*Heterometopia analis* Macquart, 1851 : 182 (209). LECTOTYPE ♀, by present designation, TASMANIA: MNHN, Paris (No. 2305).

Paralectotype: 1 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Heterometopia analis*. ♀. Tasm [deleted on label] Macq. n.sp. Tasm" and an accession label "3 47"; the condition is fair, except for loss of one third antennal segment, both mid legs and half of one hind leg. The ♀ paralectotype is conspecific with the lectotype and also bears a "3 47" accession label; all legs are present on the paralectotype, but it was not fixed as lectotype because both its third antennal segments are lost and there is extensive damage to the scutum and scutellum.

Standing under the name *analis* with the type-material are four other specimens (1 ♂, 3 ♀) in appalling condition, of which the females are *Heterometopia* specimens but the male not this genus. As the male was not described by Macquart, and these four specimens have a different accession number from the two good type-specimens (i.e. good in comparison to these other specimens), these four extra specimens are considered not to be original material.

*Heterometopia argentea* Macquart, 1846 : 298 (170). LECTOTYPE ♂, by present designation, TASMANIA (*Verreaux*): MNHN, Paris (No. 2304).

Paralectotypes: 5 ♂, same data as lectotype (MNHN).



The lectotype bears Macquart's label "Heterometopia argentea n.g., n.sp. Macq." and an accession label "13 44" and is in poor condition; both third antennal segments and all legs except left fore leg are missing, the chaetotaxy is damaged and there is a large hole in the abdominal dorsum. The ♂ paralectotypes, each with accession label "13 44" as the lectotype, are mainly very dirty and one lacks the head, but they appear to be conspecific with lectotype.

Standing with the type-material are two other male specimens without type-status, one with accession label "2900 40" and the other with a later determination label in Macquart's writing "Heterometopia argentea Macq. 1. supp Tasm".

Townsend (1932 : 35, 1939b : 222) referred to a male "Ht" (= holotype) in Paris, but did not thereby provide a valid lectotype restriction since there are several males to which his statement could apply. Paramanov (1960 : 696) referred to "Type in the Paris Museum", a statement not providing a lectotype fixation.

The BMNH collection contains a ♂ specimen bearing an identification label "Heterometopia argentea Macq." in Macquart's writing (Plate 1, F). It has no type status.

***Heterometopia rufipalpis*** Macquart, 1847 : 90 (74). Holotype ♂ [not ♀], AUSTRALIA ("Nouvelle-Hollande"): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Heterometopia rufipalpis, ♀ n.sp. Macq."; the condition is dreadful, specimen filthy with most characters completely obscured, right fore and mid legs and left fore leg lost, left wing lost, very mouldy.

Despite the condition this is undoubtedly a *Heterometopia* species, but the holotype is male and not female. This is one of the rare instances where Macquart mistook the sex, but in view of the extremely unusual appearance of the frons in the males of *Heterometopia* the mistake is not surprising. Brauer (1899 : 501) queried whether the sex was ♀, and Townsend (1932 : 35) cited it positively as ♂ although he had not seen the type; Townsend (*loc. cit.*) also refers to a male specimen in Vienna labelled "rufipalpis Mq. Type BB" but this specimen (not seen by me) cannot be part of the original type-material.

***Hyalomyia rufiventris*** Macquart, 1851 : 188 (215). Holotype ♂, TASMANIA: MNHN, Paris (No. 2308).

The holotype bears Macquart's label "Hyalomyia rufiventris ♂. Macq. n.sp." and an accession label "3 47"; it is in good condition except for a thin shroud of mould.

Townsend (1916b : 45) erected the genus *Austrophasia* for this species on the basis of Macquart's wing figure alone, not having seen the holotype. He must evidently have overlooked this when he later visited Paris, for in the *Manual of Myiology* (Townsend, 1938 : 41) he was unable to give the type sex and stated "location, Paris or lost". Presence of the holotype in MNHN, Paris, is here confirmed.

***Hystricephala nigra*** Macquart, 1846 : 283 (155). Holotype ♂, SOUTH AFRICA ('Cafferrie' = Caffraria): not located, presumed lost.

This is the type-species of *Hystricephala* Macquart, and the holotype has unfortunately never been located; it was described from a specimen collected by Monsieur Delegorgue in Caffraria, but this specimen is not in the MNHN, Paris, collection and is almost certainly lost. Townsend (1938 : 298) thought that it might be in Lille, but it is not in fact present in the Macquart collection there.

The generic name *Hystricephala*, as the type of the type-species is lost, has remained enigmatic, and the placements of the genus in Trichoprosopini by Townsend (1938 : 298) and Dexiinae by van Emden (1947 : 630) are based on unconfirmed guess-work. From Macquart's description *H. nigra* might well belong in some quite different Tachinid tribe, or conceivably not be a Tachinid at all.

***Lydella boscii*** Macquart, 1843 : 217 (60). Holotype ♂, MAURITIUS ('Ile de France') (*Bosc*): not located, presumed lost.

This was stated by Macquart to be in the collection of M. Serville, of which the Diptera are believed to be lost. The type is recorded as lost in the typescript catalogue of the Macquart collection in Paris (No. 938).



[*Jurinia australis* Macquart, 1855 : 117 (97). Recorded provenance "Nouvelle-Hollande" in error. ♀ holotype (in BMNH, ex coll. Bigot) belongs in New World genus *Archytas* Jaenicke, possibly to *A. analis* (Fabricius), as correctly established by Brauer (1898 : 500).]

***Masicera argenteiceps*** Macquart, 1851 : 166 (193). Holotype ♂ [not ♀], ? SOUTH-EAST ASIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2296).

The holotype bears Macquart's label "*Masicera argenteiceps* ♀. Macq. n.sp.", and is in good condition except for loss of most of the frontal setae. This is one of the few types for which Macquart mistook the sex, labelling and publishing it as female in error; Mesnil (1949 : 11, 1951 : 163) has also drawn attention to this.

This species is known from South-East Asia (India, Formosa, Thailand, Malaya) and not from the Pacific area, so that Macquart's citation of Oceania as the provenance is almost certainly in error.

***Masicera auriceps*** Macquart, 1851 : 168 (195). LECTOTYPE ♀, by present designation, 'TASMANIE' [or possibly New South Wales]: MNHN, Paris (No. 2300).

Paralectotype: 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Masicera auriceps*. ♀ Macq. n.sp. Tasm" and an accession label "4 46" and is in good condition except for loss of part of one mid leg and a hole in the abdomen. The ♀ paralectotype appears to be conspecific with the lectotype and bears a white rectangular label "653" (there is no evidence that it was not available to Macquart at the time of description and it is therefore held to be original material).

The name is a junior primary homonym of *Masicera auriceps* Macquart, 1843 (*Mém. Soc. Sci. Agric. Lille* 1843 : 216; *Dipt. exot.* 2 (3) : 59), but no replacement name is proposed at the present time.

***Masicera caffra*** Macquart, 1846 : 290 (162). Holotype or syntypes ♀, SOUTH AFRICA ('Cafrerie' = Caffraria): not located, presumed lost.

This species was described from a ♀ specimen (or possibly more than one specimen) collected by Monsieur Delegorgue in Caffraria, but the material is not in MNHN, Paris, and is almost certainly lost. Villeneuve (1916 : 490) erected the genus *Lydellina* for this species, though in the absence of type-material the species was recognized only from the original description; I see no reasons why Villeneuve's identification of Macquart's *caffra* should be in error, and there is no evidence to support Townsend's (1933 : 469) statement that *caffra* of Villeneuve "is quite distinct from *Lydella caffra* Mcq." (which was based simply on the assumption that, as Macquart had not mentioned the tiny setulae on the facial ridges which are present in *caffra* as recognized by Villeneuve, there must have been a misidentification involved).

***Masicera capensis*** Macquart, 1855 : 120 (100). ? holotype ♂, SOUTH AFRICA ('cap de Bonne-Espérance'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera capensis*. ♂ Macq" and is in good condition except for a hole in the scutum and another on the side of the thorax (clearly due to specimen originally having been on a larger pin and subsequently re-pinned); a few frontal setae missing.

This is one of the few of Macquart's holotypes described in the *Suppléments* on which his label lacks the usual "n.sp." inscription.

***Masicera coesiofasciata*** Macquart, 1851 : 165 (192). Holotype ♀, AUSTRALIA ('Nouvelle-Hollande, côte, orientale': probably New South Wales): MNHN, Paris (No. 2295).

The holotype bears Macquart's label "*Masicera coesiofasciata* Macq. n.sp. n. holl." and an accession label "2 47"; it is in fair condition, except for some dirt and mould, hole in scutum, and one missing mid leg.

***Masicera consanguinea*** Macquart, 1851 : 167 (194). Holotype ♂, TASMANIA: (publ. as 'De l'Océanie'): MNHN, Paris (No. 2297).

The holotype bears Macquart's label "*Masicera consanguinea* ♂. Macq. n.sp. n. holl.",

an accession label "13 44" and a rectangular white label reading "49" in faded ink; condition extremely bad, specimen completely coated in brittle deposit and fungal threads, little of the characters visible except for thick golden hairing of ♂ hypopygium and wing venation. Belongs in the Exoristini.

***Masicera fulviventris*** Macquart, 1851 : 165 (192). LECTOTYPE ♂, by present designation, "TASMANIE" [probably in error for New South Wales or Queensland]: MNHN, Paris (No. 2299). Paralectotypes: 1 ♂, 4 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Masicera fulviventris* Macq. n.sp. Tasm." and an accession label "4 46"; it is in good condition except for some dirtiness. The four ♀ paralectotypes appear to be conspecific with the lectotype; one of them has an accession label "2 47" but the others have the same accession number as the lectotype. The one ♂ paralectotype is mis-associated with the lectotype, and is a specimen of *Winthemia* R.-D.

All specimens standing under the name *fulviventris* in the MNHN collection have been accepted as original syntypes, as there is no evidence to the contrary. The specimen chosen as lectotype preserves the concept of the name given in Mesnil (1950 : 138).

***Masicera lateralis*** Macquart, 1846 : 291 (163). LECTOTYPE ♂, by present designation, AUSTRALIA ('Nouvelle-Hollande'), Sydney: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♂, same data as lectotype (BMNH).

The lectotype bears Macquart's label "*Masicera lateralis* ♂. Macq. n.sp.", and is in fair condition; specimen extremely dirty and thorax slightly greased, right wing frayed, both third antennal segments lost, abdominal chaetotaxy rubbed, but all legs are present. The ♂ paralectotype is apparently conspecific with the lectotype, and in bad condition, extremely dirty and all fore and mid legs missing; it does, however, retain the left third antennal segment and arista. Macquart cited the provenance as simply "Nouvelle-Hollande", but Bigot's own label from his collection indicates "Sidney" (= Sydney), New South Wales.

***Masicera niveiceps*** Macquart, 1851 : 164 (191). Holotype ♂, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera niveiceps*. ♀. Macq. n.sp" and is in very bad condition: left third antennal segment, mouthparts, right wing and all legs except left hind leg lost, dorsum of thorax smashed and rubbed bare, some setae of pleural regions and head lost.

***Masicera niveifacies*** Macquart, 1851 : 164 (191). Holotype ? ♂ or ♀ (publ. as ♀), ASIA ('Asie'): MNHN, Paris (No. 669).

The holotype bears Macquart's label "*Masicera niveifacies* ♀. Macq. n.sp." and an accession label "2108 42"; the condition is extremely bad, with the antennae, mouthparts, one wing, all legs except one fore leg, and the abdomen lost, and the thorax damaged.

The head of the holotype possesses proclinate orbital setae and the sex therefore appears at first glance to be female, as published and labelled by Macquart. However, despite the appalling condition, it is certain that *niveifacies* is a Carceliine extremely close to and perhaps even the same as *Argyrophylax proclinata* Crosskey in which the male as well as the female has proclinate orbital setae; there is a possibility therefore that the holotype is a male.

The true provenance of *niveifacies* is unfortunately unknown having been cited by Macquart simply as Asia; the label under the holotype in MNHN gives the locality as "Java" but I suspect that this is through confusion with *niveiceps*, which was described from Java on the same page as *niveifacies*. *Argyrophylax proclinata* Crosskey is known from New Guinea and New Britain, and Macquart's *niveifacies* is undoubtedly very close to this species, if not actually the same; it has not yet been possible to make a critical comparison directly between Macquart's holotype and Oriental material of *Argyrophylax* species, but such comparison might possibly determine with more certainty whether *niveifacies* is a senior synonym of *proclinata* based upon a male specimen with proclinate orbital setae.

The foregoing discussion implies assignment of *niveifacies* to the genus *Argyrophylax* Brauer & Bergenstamm, but I am not establishing a definite new combination at this time.

*Masicera oblonga* Macquart, 1847 : 86 (70). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera oblonga*. ♂. n.sp. Macq" and is in good condition except for some dirtiness, fraying of the wings, and slight rubbing of base of abdomen and scutellum.

*Masicera rubrifrons* Macquart, 1847 : 85 (69). Holotype ♀, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera rubrifrons*. ♀ n.sp. Macq."; it is in very bad condition, left antennae, all right legs and left mid leg lost, wings damaged, body greasy, chaetotaxy disarranged.

*Masicera rufifacies* Macquart, 1847 : 87 (71). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera rufifacies*. ♂ n.sp. Macq." on which Macquart has also written in slightly smaller writing the words "Van Diemen.", these words having been inserted between the second and third lines of the inscription. The condition is poor, body greased, arista, right mid leg and one fore leg lost, right wing and base of abdomen damaged, eyes and scutellar base dented, some chaetotaxy lost; the remaining fore leg not articulated, adhered to thoracic venter. The ♂ genitalia are removed from the holotype and slide-mounted (slide in BMNH).

*Masicera rufipes* Macquart, 1847 : 86 (70). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera rufipes*. ♂ n.sp. Macq."; the condition is fair, slightly dirty, left side of head collapsed, all legs present but left hind leg detached and adhered to pin, traces of glue on left of abdomen and on scutum, some damage to bristling.

*Masicera similis* Macquart, 1851 : 167 (194). Holotype ♀, TASMANIA: MNHN, Paris (No. 2298).

The holotype bears Macquart's label "*Masicera similis* ♀ Macq. n.sp. Tasm.", an accession label "3 47" and a rectangular white label "49" in faded ink. The condition of the specimen was bad when described, for Macquart stated in the original description that it was "en grande partie dénudée"; it is now in dreadful condition, completely and thickly coated with fungus though structurally complete.

*Masicera simplex* Macquart, 1847 : 87 (71). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Masicera simplex*. ♂ n.sp. Macq."; it is in fair condition, except for loss of both mid legs and left fore and hind legs, large hole in abdominal base and glue obscuring scutellum.

*Masicera tenuisetosa* Macquart, 1848 : 206 (46). ? holotype or syntypes ♂, JAVA: not located, possibly lost.

Macquart stated that this was described "De Java. Collection de M. Payen". I have been unable to locate the type-material of *tenuisetosa* and it is possibly lost.

*Masicera varipes* Macquart, 1846 : 291 (163). Holotype ♂, TASMANIA (*Verreaux*): MNHN, Paris (No. 2283).

The holotype bears Macquart's label "*Exorista varipes*. ♂. Macq. n.sp." and an accession label "13 44"; although the body shell is eaten out, the holotype is otherwise in good condition.

This is the only case known to me among Macquart's types (apart from *Rutilia fuscotestacea*, q.v.) in which the original label in Macquart's writing shows a different generic combination with the specific name than the published binomen; despite the discrepancy there is no doubt that the specimen labelled as "*Exorista varipes*" is actually the holotype of *Masicera varipes*, for no specimen exists in the Paris Museum bearing the latter name and the specimen labelled as "*Exorista varipes*" agrees in every respect with the information published by Macquart for *M. varipes*. I have annotated the MNHN collection to show that the specimen standing in the collection under No. 2283 as "*Exorista varipes*" is in fact holotype of *Masicera varipes*



(which in the MNHN typescript catalogue of the Macquart collection was wrongly recorded as lost).

Robineau-Desvoidy (1863 : 543) re-described the specimen labelled as "Exorista varipes" and referred to it as "*Phryno varipes*, Macq.", perhaps without realizing that it had been described by Macquart, for below the heading he cited "*Exorista varipes*: Macq. - *Collect. du Muséum.*"; Mesnil (1954 : 341), however, noted that *Phryno varipes* (Macquart) was described as a *Masicera*. It could be maintained that there is a nominal species *Phryno varipes* of Robineau-Desvoidy, but if so it would be a junior objective synonym of *Masicera varipes* Macquart through being based on the same type-specimen, and I see no point in treating *Phryno varipes* of Robineau-Desvoidy as anything other than a later citation of *varipes* Macquart.

***Masicera viridiventris*** Macquart, 1847 : 84 (68). Lectotype ♂, by fixation of Townsend (1939a : 15), TASMANIA: BMNH, London (ex coll. Bigot).

Paralectotype(s): none located, probably lost.

The lectotype bears Macquart's label "*Masicera viridiventris* n.sp. Macq."; it is in poor condition and head and abdomen have at some time been re-attached with adhesive to the thorax, both hind legs and right mid leg are missing, the third antennal segment of left side is lost, and some setae are rubbed off; the right fore leg is detached from the body and glued to the circular lectotype label.

Macquart described this species from both sexes, but only the one ♂ specimen here recorded was present in Bigot's collection when this was incorporated into the BMNH collection. Townsend (1939a : 15) referred to the one available ♂ syntype in Bigot's collection as "Ht male", and since this provides a restriction of the name to one definitely recognizable specimen I accept it as valid lectotype fixation. A thorough search has been made of the Bigot material in BMNH but no original female syntypes have been found, and their loss must be presumed.

[*Masicera viridiventris* Macquart, 1851 : 163 (190): second use of name by Macquart, junior primary homonym of *Masicera viridiventris* Macquart (above). Recorded provenance "Égypte". Townsend (1916a : 152) stated that the given locality Egypt was in error, and that *viridiventris* Macquart, 1851, was the female and a synonym of *viridiventris* Macquart, 1847, and therefore from Australia or Tasmania by presumption; he stated the same view in the *Manual of Myiology* (Townsend, 1939a : 15) though he had not seen the types of either nominal species. The type-material cannot be found of *viridiventris* Macquart, 1851 among the Bigot material and the supposed synonymy given by Townsend cannot be confirmed; neither is there any evidence that *viridiventris* Macquart, 1851, had an Australasian provenance. Pending such evidence the stated type-locality Egypt must be accepted as correct, and the synonymy given by Townsend must be rejected as unproven.]

[*Megistogaster fuscipennis* Macquart, 1851 : 186 (213). Recorded provenance "Java" in error. The ♂ holotype (in BMNH ex coll. Bigot) is a specimen of *Cordyligaster* Macquart, as known and accepted since being first noticed by Brauer (1897 : 365), and undoubtedly had a South American provenance. Name applies in the Neotropical fauna.]

***Micropalpus analis*** Macquart, 1855 : 118 (98). Holotype ♀, GABON ('royaume de Gabon'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label (incomplete) reading "*Micropalpus analis*. ♀. Macq." and is in good condition except for some dirtiness, a crack in the scutum, slight tear in left wing, and loss of a few setae.

This is a species of *Linnaemya* R.-D., and the name is a junior secondary homonym in this genus of *L. analis* R.-D., 1830. Van Emden (1960 : 462) has noted the homonymy and pointed out that no replacement name is required because the synonym *L. laxiceps* (Villeneuve) applies.

***Micropalpus assimilis*** Macquart, 1847 : 81 (65). ? holotype or syntypes ♀, MADAGASCAR: lost.

The type-material of this species is stated to be lost in the typescript catalogue of the Macquart collection in MNHN, Paris, and none was found from my own searches. It is considered truly lost.

***Micropalpus bicolor*** Macquart, 1848 : 204 (44). Holotype ♀, AUSTRALIA ('Nouvelle-Hollande'): not located, presumed lost.

Macquart described this species from a single female from Monsieur Fairmaire's collection; that he had only one specimen is clear from his comment "L'individu que nous décrivons a la trompe et les palpes mutilés".

The Diptera from Fairmaire's collection are apparently lost, and it is now unlikely that the holotype will be found. There are however specimens of *bicolor* determined, and some labelled, by Macquart in both the MNHN, Paris, and the BMNH, London, collection as detailed below.

Standing in MNHN Macquart collection are eight ♀ specimens under the name *Micropalpus bicolor*, one of which has Macquart's determination label "Micropalpus bicolor. ♀. Macq. 1. supp. Tasm."; in the BMNH collection there are two ♂ specimens, each with Macquart's determination labels reading respectively "Micropalpus bicolor. var. ♀. Macq. J.B." and "Micropalpus bicolor ♀ Macq.", both specimens from Bigot's collection (the initials "J.B." on one of Macquart's labels signify J. Bigot). Bigot's specimens were from Sydney, according to the locality written on his label. Townsend (1932 : 42), in his discussion of *M. brevigaster*, cited one of the Bigot collection specimens from Sydney as "female Ht" of *M. bicolor*, but this was in error, as the specimens from Bigot's collection are not type-material.

***Micropalpus brevigaster*** Macquart, 1846 : 277 (149). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Micropalpus brevigaster ♂. Macq. n.sp." and is in fair condition; both fore legs and both hind tarsi lost, tibia and tarsus of left mid leg lost, some fraying of wings.

The Bigot collection, when incorporated into BMNH collection, contained a series of two ♀ and three ♂ specimens of *brevigaster* standing with the holotype, but as the female sex was not originally described and as one of the males bears a later determination label of Macquart reading "Micropalpus brevigaster. ♂ Macq.", none of these specimens (now all in BMNH) are considered to be original material.

***Micropalpus concavicornis*** Macquart, 1851 : 146 (173). Holotype ♂ [not ♀], AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2263).

The holotype bears Macquart's label "Micropalpus concavicornis ♀. Macq. n.sp. nov. holl." and an accession label "2 47"; it is in fair condition, but right fore and mid legs lost, eyes partially collapsed, and thorax and abdomen greasy.

This is one of the few instances where Macquart mistook the sex of the holotype, which is ♂ (not ♀ as published and labelled).

***Micropalpus longirostris*** Macquart, 1843 : 203 (46). Syntypes ♂, SOUTH AFRICA ('Du Cap'): lost.

Macquart described this species from specimens in the "collections de MM. Serville et Guerin" (a statement which confirms that *longirostris* was based on more than one syntype). The original material cannot be found in MNHN collection, and is considered to be lost; it is recorded as lost in the typescript catalogue of Macquart's collection in Paris (ref. no. 929).

However, the BMNH collection contains one ♀ and two ♂ specimens of *M. longirostris* from the Bigot collection, of which one of the males has an identification label in Macquart's writing which reads "Micropalpus longirostris ♂. Macq."; this is the ♂ specimen to which Brauer (1897 : 369) referred, and the obverse side of Macquart's label bears Brauer's reference. Townsend (1939a : 215) erroneously referred to "Ht male - Origin, Cape Good Hope; location Newmarket" for *M. longirostris*, wrongly assuming that the ♂ specimen seen by Brauer was the holotype, and clearly overlooking the fact that the species was originally described by Macquart from specimens in the collections of Serville and Guérin-Ménéville.

The specimens from Bigot's collection have no type-status, though it may be noted that the specimen from Bigot's collection named by Macquart himself is undoubtedly correctly identified and establishes the identity of *Micropalpus longirostris* without doubt.

***Micropalpus pilifacies*** Macquart, 1851 : 146 (173). Holotype ♂ [not ♀], AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2262).

The holotype bears Macquart's label "Micropalpus pilifacies. ♀ Macq. n.sp. n.holl." and an accession label "2 47"; it is in fair condition, both third antennal segments and both mid legs lost, scutum slightly crushed.

This is one of the few instances where Macquart mistook the sex; the holotype, though ♂, has a very wide frons and proclinate orbital setae and therefore resembles a ♀.

***Micropalpus vittatus*** Macquart, 1846 : 278 (150). Holotype ♂, TASMANIA: MNHN, Paris (No. 2265).

The holotype bears Macquart's label "Micropalpus vittatus. ♂. Macq. n.sp." and an accession label "13 44"; it is in very good condition except for loss of some setae and one mid leg.

Standing in MNHN collection with the holotype are five other specimens (4 ♂, 1 ♀) but none of these are considered to be original type-material for these reasons: the ♀ specimen (even though it bears a "13 44" accession number like the ♂ holotype) was recorded later by Macquart (1851 : 146 (173)), when he stated that he had seen the female since describing the male earlier, and the ♀ bears a later determination label of Macquart reading "Micropalpus vittatus. ♂♀ Macq. 1. supp. Tasm."; this label on the ♀ mentions the ♂ sex as well, and this makes it evident that there were specimens of both sexes which were not seen by Macquart at the time of original description, even though they were received in MNHN in 1844 - three of the four males, labelled "13 44" are considered to be later material in this category; the one remaining ♂ has an accession label "3 47" and is therefore certainly not an original specimen. One other point thought to give further confirmation that only one male was original material (therefore holotype) is the fact that it is mounted on a different type of much thicker pin than all the other specimens.

There is a possibility that Australia and not Tasmania is the true provenance of this species.

***Microtropesa ignipennis*** Macquart, MS name. Name published by Brauer (1899 : 510-511) as *Microtropeza ignipennis* Mcq. and placed in synonymy with *Microtropesa sinuata* (Donovan), therefore unavailable from first publication by Brauer under Article 11 (d) of the *International Code of Zoological Nomenclature*, 1961.

The Macquart collections in MNHN, Paris, and in MHN, Lille, contain specimens standing under the name *Microtropesa ignipennis* Macquart and identified as such by Macquart; as the name *ignipennis* was unpublished by Macquart and unavailable from publication by Brauer they have no status. They are, in fact, specimens of *M. sinuata*, though no direct comparison can be made as Donovan's type-material of *sinuata* is lost (Townsend's statements, 1932 : 40 and 1939a : 13, of a female holotype in London are in error).

***Microtropesa nigricornis*** Macquart, 1851 : 199 (226). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2338).

Paralectotypes: 1 ♂, 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Microtropesa nigricornis. ♂.♀. Macq. n.sp.", an accession label "3 47" and a rectangular white label with "107" in faded ink; it is in very good condition.

The ♀ paralectotype is conspecific with the lectotype and has no accession label, but the ♂ paralectotype is mis-associated with the lectotype and has an accession label "2 47"; the latter specimen has the abdominal ground colour blue-black and only one pair of median marginal setae on tergite 3 (instead of ground colour dark tawny brown and five pairs of median marginals on tergite 3 as in the lectotype), and appears to be a specimen of *Microtropesa intermedia* Malloch. The syntype ♂ which has been fixed as lectotype is the one agreeing most closely with Macquart's description and plate figure.



*Myobia cingulata* Macquart, 1851 : 179 (206). LECTOTYPE ♂, by present designation, 'TASMANIE' [more probably New South Wales, see annotation]: MNHN, Paris (No. 2303).

Paralectotypes: 9 ♂, same data as lectotype (8 in MNHN, 1 in BMNH).

The lectotype bears Macquart's label "Myobia cingulata. ♂♀ Macq. n.sp. Tasm. n.holl." and an accession label "4 46"; it is in rather poor condition (though better than other syntypes) and has both third antennal segments and left fore and mid legs lost, holes in eyes and thorax, part of left hind femur missing.

This species was described from both ♂ and ♀ sexes (as shown by Macquart's label on the lectotype as well as the original description) but no ♀ syntype has been found. With the lectotype in MNHN are eight males which are all considered syntypes, in the absence of contrary evidence, of which six have the "4 46" accession label like the lectotype and of which the others have each an accession label "2 47"; the BMNH collection also has one male syntype (paralectotype) with a "2 47" label, and this specimen has another label reading "Recd. in exchange from Mus. Nat. d'Hist. Nat., Paris. B.M. 1924-101" (an exchange arranged by Austen in 1924).

Special attention must be drawn to the locality information for *cingulata* published by Macquart. In the original description he stated that the provenance was "Nouvelle-Hollande, côte orientale, et de la Tasmanie", and his own label (on the lectotype) bears the words "Tasm. n.holl." (i.e. Tasmania and Australia). The individual syntypes do not carry data labels showing which were from Australia and which from Tasmania, but this can be deduced from the accession labels: labels "2 47" refer to specimens from "Nouvelle-Hollande, côte orientale" (see also, for example, *Chetogaster violacea* and *Exorista dispar*), whereas specimens with accession reference "4 46" are recorded in MNHN and by Macquart as being from Tasmania; however, no subsequent material of *Trigonospila cingulata* (Macquart) or of, for example *Grapholostylum dorsomaculatum* Macquart (q.v.), species whose types bear the "4 46" reference and are said to be from Tasmania, has been found in Tasmania, and it seems likely that for such species there is an error in the published locality data. Probably the original material came from New South Wales.

Townsend (1932 : 36, 1933 : 457, 1939b : 155) referred in error to a male holotype of *cingulata* from east Australia; as however there are several such original syntypes the statement of Townsend does not provide fixation of a lectotype, which is here newly designated.

*Myobia ruficeps* Macquart, 1847 : 89 (73). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Myobia ruficeps. ♂ n.sp. Macq." and is in very bad condition, with all legs lost, head partly collapsed, thorax and abdomen slightly rubbed and greasy.

*Myobia tenuisetosa* Macquart, 1847 : 90 (74). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Myobia tenuisetosa. ♂ n.sp. Macq." and is in bad condition; both hind legs and left mid leg are lost, apex of remaining mid tarsus and right fore leg from base of tibia also missing, right arista lost, specimen slightly dirty and thorax and abdomen rubbed and a little greasy.

*Nemoreaea brevisetosa* Macquart, 1846 : 282 (154). Holotype ♂, TASMANIA: MNHN, Paris (No. 2271).

The holotype bears Macquart's label "Nemoreaea brevisetosa ♂. Macq. n.sp.", and an accession label "13 44"; it is in bad condition because the head, left fore leg and right mid and hind legs are missing (though what remains of the specimen is in good condition).

*Nemoreaea nitidiventris* Macquart, 1851 : 155 (182). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales): MNHN, Paris (No. 2270).

The holotype bears Macquart's label "Nemoreaea nitidiventris ♂ Macq. n.sp.", an accession label "2 47" and a rectangular white label with "46" in faded ink; it is in very good condition except for loss of left fore leg. The generic name is spelt *Nemoreaea* on Macquart's original label but his published spelling was *Nemoreaea*.

***Nemorea rufipes*** Macquart, 1843 : 211 (54). Holotype ♂, SOUTH AFRICA ('cap de Bonne-Espérance'): MNHN, Paris (No. 936).

The holotype bears the label "Nemoroëa rufipes" in Macquart's writing, a small rectangular label reading "Cap" in faded ink, and a circular blue label with the words "Guérin/Ménneville" in mauve print; the holotype is in appalling condition, all that remains being the dorsal shell of the thorax and scutellum with wings attached and the dorsal shell of the abdomen, plus part of one hind leg; these remains are gummed to a card attached to a carrier pin. The generic name is spelt *Nemoroëa* on Macquart's original label, but *Nemorea* was the published spelling.

Despite the condition it can be confirmed without doubt that this is a true *Nemoroëa* R.-D., because both the calyptres are undamaged and show the complete covering of long soft pale hair characteristic of most true *Nemoroëa* species.

***Nemoroëa bicolor*** Macquart, 1851 : 155 (182). Holotype ♀, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Nemoroëa bicolor ♀ Macq. n.sp."; the condition is fair, left fore and mid legs lost and right fore and hind tarsi lost (except for basitarsal segment), dorsum of thorax greased and its chaetotaxy rubbed.

***Ochroplevrum javanum*** Macquart, 1851 : 185 (212). Holotype ♂, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Ochroplevrum javanum ♂. Macq. n.sp" and is in rather poor condition; the body is greased and head very dirty, the right fore leg and left mid legs are missing, the scutum is perforated and base of the abdomen constricted. The ♂ hypopygium is in good condition and contained in a small vial attached to the specimen.

***Ocyptera flavifrons*** Macquart, 1851 : 187 (214). LECTOTYPE ♂, by present designation, 'TASMANIE' [more probably New South Wales, see annotation]: MNHN, Paris (No. 2307).

Paralectotype: 1 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Ocyptera flavifrons ♂. Macq. n.sp. Tasm." and an accession label "4 46"; the specimen is very dirty, lacks some setae and has a dent in left eye, but otherwise is in good condition. The ♂ paralectotype is conspecific with the lectotype and also bears the "4 46" accession reference (it is certainly an original syntype because it bears this number and also because Macquart indicated a size range for *flavifrons*, showing that there was more than one specimen).

It is probable that Tasmania is not the correct provenance, as this is one of the "4 46" reference species for which no later material has been found in Tasmania; Paramonov (1956 : 369-370) has recorded many specimens from the Australian mainland, but none from Tasmania, and it is probable that New South Wales is the true provenance of the original material.

***Ocyptera pictipennis*** Macquart, 1835 : 186. Holotype ♂, SENEGAL: MNHN, Paris (No. 940).

The holotype bears a label in Macquart's writing "Ocyptera pictipennis Macq." and a circular white label reading "Senegal Guerin"; the specimen is largely destroyed, all that remains is one wing and part of the thorax which are glued to the pin.

Despite the condition, the wing pattern (to which Macquart's specific name refers), the scutellar setae and the scutal pattern confirm that this species is correctly recognized in van Emden (1945 : 405, 407).

***Omalogaster appendiculatus*** Macquart, 1846 : 318 (190). *Nomen nudum*, cited in description of *Omalogaster limbinevis*.

***Omalogaster brevipalpis*** Macquart, 1846 : 317 (189). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2347).

Paralectotype: 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Omalogaster brevipalpis. Macq. n.sp." and an accession label "13 44"; it is in fair condition, both hind legs missing and abdomen crushed. The ♀ paralectotype also has the "13 44" accession label, and is probably mis-associated

with the lectotype; it is in very bad condition, with abdomen, one wing and all but one leg lost and thorax badly smashed.

***Omalogaster limbinevris*** [*sic*] Macquart, 1846 : 317 (189). Holotype ♀ [publ. as '♂', labelled as '♀'], TASMANIA: MNHN, Paris (No. 2348).

The holotype bears Macquart's label "*Omalogaster limbinevris*. ♀. Macq. n.sp." and an accession label "13 44"; it is in poor condition, very dirty, scutum damaged, all legs lost except right hind leg (even this lacks the tarsus except for basitarsus), right third antennal segment lost, wings torn.

The spelling *limbinevris* is accepted as correct, because it is consistent both in original publication and on Macquart's original label, and also because Macquart repeated this spelling in his table of species described in the *Diptères exotiques* work and its first four *Suppléments* (see p. 358 of *Suppl.* 4, 1851); it is therefore considered *not* to be an incorrect original spelling, by inadvertent error, of 'limbinervis'.

***Omalogaster nitidus*** Macquart, 1846 : 318 (190). ? holotype or syntypes ♀, TASMANIA: not located, probably lost.

This species was described from female specimen (or possibly more than one specimen) recorded by Macquart as "De la Tasmanie. Muséum", and the type-material should be in MNHN, Paris. The name appears in one of the boxes of Australian material in the Macquart collection in Paris, and also in the typescript catalogue to this collection (No. 2350), but the original material can no longer be found in MNHN and is presumably lost or destroyed.

However, the BMNH collection in London contains one ♀ specimen from the Bigot collection which fits Macquart's description and is a later specimen identified by Macquart, for it bears his label "*Omalogaster nitidus*. ♀. Macq." and the pencilled word "Sydney"; Bigot's label also gives the locality Sydney for this specimen, which can be accepted as correctly identified (and enables *nitidus* to be correctly placed).

***Phorocera acutangulata*** Macquart, 1848 : 208 (48). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Phorocera acutangulata* ♂. nov.sp."; it is in very bad condition, body dirty and with some mould, both mid legs and left fore and hind legs lost, scutal chaetotaxy rubbed off, right wing and apical half of left wing missing, abdomen distorted basally.

***Phorocera biserialis*** Macquart, 1847 : 89 (73). Lectotype ♂, by fixation of Townsend (1940 : 158), TASMANIA: BMNH, London (ex coll. Bigot).

The lectotype bears Macquart's label "*Phorocera biserialis* n.sp. Macq." and is in fair condition; the antennae and palpi, the head setae, the left fore leg, parts of both mid legs and most of the right hind tarsus are lost.

Macquart described this species from both sexes, but no original female material has been found and is certainly lost. Only one male syntype was present in Bigot's collection when examined by Brauer (1897 : 347), and this specimen was referred to by Townsend (1940 : 158) as "Ht male"; as this statement restricts the name to one recognizable specimen I accept it as valid lectotype fixation. The lectotype has been accordingly labelled.

***Phorocera cilipes*** Macquart, 1847 : 88 (72). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Phorocera cilipes*. ♂. n.sp. Macq." and is in fair condition; the right antenna, left mid leg and right hind leg are missing, scutum and scutellum damaged, wings torn, and the abdomen slightly greasy; the head (believed correctly associated) is detached from the cervical region and glued to the anterior edge of the prescutum.

Macquart (1848 : 209 (49)) later briefly described the supposed ♀ of *cilipes* from a specimen from 'Nouvelle-Hollande' in Fairmaire's collection; this specimen has not been found and is almost certainly lost.

***Phorocera flavipalpis*** Macquart, 1855 : 122 (102). Holotype ♀ [publ. as '♂', labelled as '♀'], NEW SOUTH WALES, Sydney: BMNH, London (ex coll. Bigot).



The holotype bears Macquart's label "Phorocera flavipalpis ♀. Macq. n.sp. Sydney" and is in poor condition; the body is dirty, right fore leg and both mid legs and the antennae are lost, the wings damaged and thoracic dorsum rubbed.

Though published as ♂ the holotype is actually ♀, as Macquart noted on his original label, and as noted by Brauer (1897 : 345).

**Phorocera graciliseta** Macquart, 1847 : 88 (72). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Phorocera graciliseta. ♂. n.sp. Macq." and is in very bad condition; specimen covered in mould, right mid and hind legs, left fore tarsus and apices of other left tarsi lost, right wing and apical half of left wing missing, hole in scutellum.

A specimen (♂) of this species from "Tasmania" was found standing unnamed in Bigot's collection when this was incorporated into BMNH collection, and has no type-status.

**Phorocera grandis** Macquart, 1851 : 171 (198). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales or Queensland): MNHN, Paris (No. 2284).

The holotype bears Macquart's label "Phorocera grandis. ♂. Macq. n.sp. n.holl." and an accession label "2 47"; it is in fair condition, but head crushed dorsally with some setae and apical part of left third antennal segment missing, both mid legs lost, thorax badly distorted ventrally at pin emergence site, generally slightly dirty.

Standing in MNHN collection with the holotype is a small ♀ specimen with the same "2 47" accession reference as the holotype, and lacking the head; the specimen was not mentioned in the original description, is much smaller than the size measurement given for the ♂, and is certainly not an original syntype.

**Phorocera hyalipennis** Macquart, 1851 : 170 (197). Holotype ♀, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Phorocera hyalipennis ♀. Macq. n.sp." and is in fairly good condition except for loss of left fore and mid legs and holes in scutum and left sternopleural region; the head is in exceptionally good condition.

**Phorocera hyalipennis** Macquart, 1855 : 122 (102). ? holotype or syntypes ♂, SOUTH AUSTRALIA, Adelaide ('Nouvelle-Hollande; colonie d'Adélaïde'): not located, presumed lost.

Macquart gave no indication of the source of his material of this species in the original description, but it is known from Macquart's (1855 : 25 (5)) introduction to the 5<sup>e</sup> *Supplément* of *Diptères exotiques* that the material he described from the "colonie d'Adélaïde" formed part of Bigot's collection. Brauer (1897 : 346) saw the ♂ holotype of *Phorocera hyalipennis* Macquart, 1855 [not Macquart, 1851] and noted that it stood in Bigot's collection with a "? Java" locality label by Bigot, and also that it lacked the abdomen. The ♂ holotype should therefore be present in Bigot's collection, but in spite of careful search of Bigot's material while incorporating it into the BMNH collection I have been unable to find it, and believe that it must be lost.

*Phorocera hyalipennis* Macquart, 1855, is a junior primary homonym of *P. hyalipennis* Macquart, 1851 (above) but as the former name remains completely enigmatic because of loss of the holotype I am not proposing any replacement name at this time.

**Phorocera javana** Macquart, 1851 : 170 (197). Holotype ♀, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Phorocera javana. ♀ Macq. n.sp." and is in fair condition except for loss of left fore leg and left mid tarsus, rubbing of mid dorsum of scutum, smashed scutellum and mould on abdominal venter and left hind leg.

**Phorocera lateralis** Macquart, 1846 : 293 (165). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2286).

The lectotype bears Macquart's label "Phorocera lateralis Macq. n.sp." and an accession label "13 44"; the condition is poor, very dirty and wings coated with dirt, head much distorted with facial regions and eyes pushed in and twisted on neck so that mouthparts are upwards.

Macquart described this species from both sexes, but no original female material has been found and is presumed to be lost.

Standing in MNHN collection with the lectotype is a second specimen which might possibly be an original male syntype, but as it is a Sarcophagid in filthy condition (with body tagmata reunited by glue) which does not satisfactorily fit Macquart's description, it is thought probable that it was added later in error and therefore that it has no type-status.

***Phorocera maculata*** Macquart, 1851 : 173 (200). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande côte orientale': probably New South Wales): MNHN, Paris (No. 2285).

The holotype bears Macquart's label "*Phorocera maculata* ♂. Macq. n.sp. n.holl." and an accession label "4 46"; it is in very bad condition, largely coated with a gummy filth, both antennae and left mid leg missing, most of right hind leg lost, large hole in right base of abdomen and hypopygium lost.

***Phorocera mucrocornis*** Macquart, 1851 : 174 (201). Holotype ♀, TASMANIA: MNHN, Paris (No. 2289).

The holotype bears Macquart's label "*Phorocera mucrocornis*. ♀. Macq. n.sp. Tasm." and an accession label "3 47"; it is in extremely bad condition, thickly and completely coated with mould and filth (which, although the structure is more or less complete, makes it almost impossible to distinguish the features).

***Phorocera ornata*** Macquart, 1851 : 172 (199). LECTOTYPE ♂, by present designation, 'TASMANIE' [more probably New South Wales, see annotation]: MNHN, Paris (No. 2291).

Paralectotypes: 1 ♂, 2 ♀, same data as lectotype (MNHN).

The specimen selected as lectotype, though ♂, bears Macquart's label "*Phorocera ornata*. ♀. Macq. n.sp. Tasm." and an accession label "4 46"; it is in fair condition, some mould, right hind leg lost, some deposit on the head. All the paralectotypes also have the accession reference label "4 46", and the ♂ paralectotype is in extremely bad condition, being completely concealed in a dirty deposit.

Macquart cited only the ♀ in the original description, but as the sexes are superficially very alike and easily confused in this species, and as all the four specimens of both sexes in MNHN collection have the same accession reference, they are all considered to be original syntypes.

It is possible that New South Wales and not Tasmania is the true provenance of the type-material, as this is one of the Macquart species with MNHN accession reference "4 46" for which later specimens have not yet been found in Tasmania, though well known from Australia.

***Phorocera scutellata*** Macquart, 1846 : 293 (165). Holotype ♂, TASMANIA: MNHN, Paris (No. 2287).

The holotype bears Macquart's label "*Phorocera scutellata*. ♂. Macq. n.sp." and an accession label "13 44"; it is in fair condition, head reattached (but presumed correctly associated), one antenna and arista of other antenna, left fore leg, right fore tarsus and right mid leg lost, thorax damaged.

Standing with the holotype in MNHN is a mis-associated ♂ specimen that has no type-status, and does not fit the original description.

***Phorocera subpubescens*** Macquart, 1851 : 172 (199). Holotype ♀ [not ♂], 'TASMANIE' [probably in error for New South Wales]: MNHN, Paris (No. 2290).

The holotype bears Macquart's label "*Phorocera subpubescens*. ♂. Macq. n.sp.", an accession label "4 46" and a rectangular white label reading "47"; it is in fair condition, but left mid and hind legs lost, frontal setae rubbed off, dorsum of thorax smashed.

The holotype is ♀ but has a somewhat ♂-like facies, and this probably accounts for Macquart mistaking the sex and publishing it (as well as labelling the specimen) as ♂.

***Phorocera tessellata*** Macquart, 1846 : 293 (165). Holotype ♂, TASMANIA: MNHN, Paris (No. 2288).

The holotype bears Macquart's label "*Phorocera tessellata*. ♂. Macq. n.sp." and an

accession label "13 44"; it is in fair condition only, extremely dirty, left hind leg lost, head crushed in at antennal bases.

Standing with the holotype in MNHN are two correctly associated ♂ specimens, which are later-determined material and not type-material (as confirmed by their labelling); they bear accession labels "2 47" and "3 47" respectively, and the latter-labelled specimen also bears Macquart's determination label "Phorocera tessellata. Macq. 1. supp. Tasm.".

The BMNH, London, collection contains one ♂ specimen (labelled as from Tasmania and ex Bigot's collection) which has an identification label "Phorocera tessellata ♂. Macq." in Macquart's writing and appears to be correctly named.

***Platytaenia maculata*** Macquart, 1851 : 179 (206). Holotype ♀, TASMANIA: MNHN, Paris (No. 2302).

The holotype bears Macquart's label "Platytaenia maculata. ♀. Macq. n.g., nov.sp. Tasm.", an accession label "3 47" and a rectangular white label reading "48."; it is in bad condition, head lost, left mid leg missing, body greasy.

Townsend (1936 : 232, 1939a : 373) also noted that the head of the holotype is lost. This fact makes it particularly difficult to place the genus *Platytaenia* Macquart, of which *maculata* is type-species, and at present the genus is enigmatic.

***Polychaeta nigra*** Macquart, 1851 : 154 (181). Holotype ♀, TASMANIA: MNHN, Paris (No. 2269).

The holotype bears Macquart's label "Polychaeta nigra. ♀ Macq. n.g., n.sp. Tasm." and an accession label "3 47", and is in fair condition; much mould, head coated in grimy deposit, right mid leg lost, some thoracic bristling rubbed (Townsend, 1932 : 50, described the head as "covered with mycelia and grime").

***Prosenia dispar*** Macquart, 1851 : 203 (230). LECTOTYPE ♀, by present designation, 'TASMANIE' [probably in error for New South Wales]: MNHN, Paris (No. 2352).

Paralectotype: 1 ♀, same data as lectotype (MNHN).

The lectotype bears Macquart's label "Prosenia dispar. ♀. Macq. n.sp." and an accession label "4 46"; it is in fair condition, head slightly crushed, thorax dirty, scutum damaged, and left mid leg lost.

The paralectotype ♀ also has the "4 46" accession label, and is probably correctly associated with the lectotype, although it differs slightly in abdominal colour and in colouring of the pleural and humeral hair.

This is one of the species for which the stated provenance of Tasmania is suspect, and for which New South Wales is a more probable locality of origin.

***Prosenia dorsalis*** Macquart, 1847 : 97 (81). Holotype ♂, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Prosenia dorsalis. ♂ n.sp. Macq." and (except for the good head) is in bad condition; both mid and both hind legs are lost, apical halves of wings lost, body greasy and chaetotaxy partially rubbed off.

***Prosenia rufiventris*** Macquart, 1847 : 96 (80). Holotype ♀, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Prosenia rufiventris. ♀ n.sp. Macq." and is in poor condition; antennae and frontal chaetotaxy lost, right mid and hind legs lost, left mid tarsus lost, only basitarsi remaining of fore legs and left hind leg, thorax greased and dorsum rubbed, abdominal chaetotaxy lost.

***Prosenia vittata*** Macquart, 1843 : 249 (92). Holotype ♀, NEW SOUTH WALES, Sydney ('Port Jackson'): MNHN, Paris (No. 2351).

The holotype bears Macquart's label "Prosenia vittata Guer. nov.sp.", a circular label reading "Guerin/Menne-/ville" in mauve print and a rectangular label reading "Prosenia vittata guer" in pencil and "Ports jacks" [i.e. Port Jackson] in faded ink.

The specimen which Macquart described as *Prosenia vittata* is also, by a curious error made by Macquart, the holotype of *Prosenia vittata* Guérin-Ménéville, 1838. It appears certain that



Macquart overlooked the fact that Guérin-Méneville (1838 : 299) had already described *P. vittata*, and clearly he thought that he was describing the species for the first time (for he suggested that it might be the female of *P. conica* Guérin-Méneville, of whose description he was aware, and also because he cites "Guer." on his own original label). The two specimens (holotypes) of *P. vittata* and *P. conica* are both from Port Jackson and are mounted exactly similarly on the same type of unusual short thick pin and are similarly labelled (except for Macquart's label on *vittata*), and undoubtedly the specimen of *vittata* is the holotype of *Prosenia vittata* Guérin-Méneville. Hence it follows that Macquart in fact redescribed *P. vittata* from Guérin-Méneville's holotype, and *P. vittata* Macquart is therefore a junior objective synonym and a junior primary homonym of *P. vittata* Guérin-Méneville.

The holotype of *P. vittata* Macquart (= holotype of *P. vittata* Guérin-Méneville) is in poor condition, dirty, abdomen (except for T<sub>1</sub>+2) lost, right mid leg and both hind legs lost, left hind tarsus lost, thorax damaged by very large pin (both wings are, however, complete).

***Rutilia analoga*** Macquart, 1851 : 191 (218). Holotype ♀ [publ. as ♂, 'TASMANIE' [probably in error for New South Wales]: MNHN, Paris (No. 2322).

The holotype bears Macquart's label "*Rutilia analoga* ♀. Macq. n.sp.?", and an accession label "4 46", and is in very good condition.

The sex was published as ♂ in the original description, but is actually ♀ as Macquart indicated on his original label cited above. This is one of the species for which the published provenance of Tasmania is almost certainly wrong, and for which New South Wales is probably the true provenance.

***Rutilia angustecarinata*** Macquart, 1848 : 211 (51). ? holotype or syntypes ♂, JAVA: not located, possibly lost.

Macquart stated that this was described "De Java. Collection de M. Payen". I have been unable to locate the type-material of *angustecarinata* and it is possibly lost.

***Rutilia assimilis*** Macquart, 1851 : 192 (219). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2317).

Paralectotypes: 2 ♀, same data as lectotype (MNHN); 1 spec. (sex ?), same data as lectotype (MHN, Lille, box G.19 of Macquart's coll. and with number "379").

The lectotype bears Macquart's label "*Rutilia assimilis* ♂♀. Macq. n.sp." and an accession label, "4 46", and is in good condition except for loss of both third antennal segments and the right hind leg. The ♀ paralectotypes in MNHN bear the same "4 46" accession reference and are conspecific with the lectotype.

Macquart cited "Nouvelle-Hollande, côte orientale et Tasmanie" as the provenance of the type-material, but none of the specimens now in MNHN have the "2 47" accession reference which refers to material from the "côte orientale" of Australia, and all have the "4 46" reference for which the locality is recorded as Tasmania. Because of this, combined with the fact that *R. assimilis* is common in Tasmania, the lectotype and paralectotype type-locality is here accepted as Tasmania.

Townsend's (1938 : 419) statement of "Ht male - Origin, east coast Australia; location, Lille or lost" has no validity as a fixation of lectotype, because it is based on a mere guess about the types, their origin and locations; he evidently did not see the material in Paris (which Macquart cited as the depository) and there is no specimen now in MNHN, Paris, with a reference number indicating an east Australian origin. Present designation of a lectotype is therefore necessary.

The "type" is not in the Vienna Museum, as Paramonov (1968 : 375) wrongly stated.

[*Rutilia dubia* Macquart, 1846 : 311 (183). Not Tachinidae: belongs in Calliphoridae, tribe Rhiniini, synonym of *Thelychaeta viridaurea* (Wiedemann), synonymy established by Peris (1952 : 158) and here confirmed (holotype ♂ in BMNH, London, examined).]

***Rutilia elegans*** Macquart, 1846 : 309 (181). Holotype ♂, NEW SOUTH WALES, Sydney ('île Sydney'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Rutilia elegans*. ♂. Macq. n.sp." which is gummed to another label from Bigot's collection with the additional words "Sidney" and "nom par.

Macq" in Bigot's writing: the holotype is in fair condition, left mid tarsus and both hind legs missing, scutum damaged, abdomen glued to thorax and damaged at right side of base.

The holotype of this species was incorporated into BMNH, London, collection in 1904, and has a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904" on which Austen has added "Sydney, New South Wales." in pencil.

***Rutilia flavipennis*** Macquart, 1848 : 210 (50). ? holotype or syntypes ♂, JAVA: not located, possibly lost.

Macquart stated that this was described "De Java. Collection de M. Payen". I have been unable to locate the type-material of *flavipennis* and it is possibly lost.

***Rutilia fulgida*** Macquart, 1846 : 308 (180). LECTOTYPE ♂, by present designation, NEW SOUTH WALES, Sydney ('De l'Océanie, île Sydney'): BMNH, London (ex coll. Bigot).

Paralectotypes: 3 ♂, same data as lectotype (BMNH).

The lectotype bears Macquart's label "*Rutilia fulgida* ♂. Macq. n.sp" which is gummed to another label from Bigot's collection with the additional words "Sidney." and "nomm. par. Macq." in Bigot's writing; the lectotype is in good condition, except for loss of the tips of both antennae. The ♂ paralectotypes are conspecific with the lectotype, also in good condition except that the right wing of two of them is damaged.

The syntypes of this species were incorporated into BMNH, London, collection in 1904, and each has a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Sydney, New South Wales." in pencil.

***Rutilia fuscotestacea*** Macquart, 1846 : 306 (178). Holotype ♀, NEW SOUTH WALES, Sydney ('De l'Océanie, île Sydney'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Lucilia* [*sic, lapsus*] *fuscotestacea* ♀. Macq. n.sp." which is gummed to another label from Bigot's collection with the additional words "Sydney" and "Nomm. par. Macq." in Bigot's writing; it is in good condition except for loss of a few tarsal segments and a few thoracic setae.

The holotype of this species was incorporated into BMNH, London, collection in 1904, and has a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Sydney, New South Wales." in pencil.

Standing under this name in BMNH, with the holotype, are seven ♀ specimens, each with a label reading "Australia" in pencil in Austen's writing and "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." in print, but none of these are types; six of them stood in Bigot's collection as later identified material of *Rutilia viridinigra* Macquart, and the remaining one stood in Bigot's collection as a later identified specimen of *R. fuscotestacea*; this last specimen, and two of the other six, have pencilled annotation labels by Austen to this effect.

The holotype of this species is the only primary type of a Tachinid described by Macquart (apart from *Masicera varipes*, q.v.) which, so far as I know, has a different generic name on Macquart's original label from that in the binomen published by him; the word "*Lucilia*" on the label in this case is an obvious mistake.

***Rutilia media*** Macquart, 1846 : 310 (182). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2319).

Paralectotypes: 2 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Rutilia media* ♂. Macq. n.sp." but has no accession label; it is in very good condition, except for loss of right mid leg, and slight denting of left side of head. The ♂ paralectotypes are correctly associated with the lectotype, and also lack accession labels.

Standing in MNHN collection with the type-material is a later added ♂ specimen bearing Macquart's determination label "*Rutilia media* ♂. Macq. supp." and an accession label "1 46", and also one ♀ specimen with a printed label reading "Tasmanie" which has also clearly been added to the collection at a later date from the original material (Macquart did not describe the female and the specimen is not a syntype).

***Rutilia minor*** Macquart, 1846 : 310 (182). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2320).

Paralectotypes: 1 ♂, 2 ♀, same data as lectotype (MNHN); 1 ♂, NEW SOUTH WALES, Sydney (BMNH, ex coll. Bigot); 2 specimens (? sex), TASMANIA ('van Diemen') (MHN, Lille, box G.19 of Macquart's coll.).

The lectotype bears Macquart's label "Rutilia minor. ♂. Macq. n.sp." and an accession label "13 44"; the right fore and right mid legs are lost and the thoracic dorsum slightly crushed, but the condition is otherwise very good with all hairing and bristling especially well preserved. The paralectotypes are believed to be correctly associated with the lectotype (though legs of the females are red and those of males black, and it is not yet completely proven that this sexual dimorphism exists in the one species), and those in MNHN have the same "13 44" Tasmanian accession reference as the lectotype.

The ♂ paralectotype in BMNH is certainly an original syntype, as it bears Macquart's original label "Rutilia minor. ♂. Macq. n.sp."; this label is gummed to another label from Bigot's collection with the additional words "Syney" [= *lapsus* for Sydney], "nom. par. Macq." and "♂ & ♀." in Bigot's writing (the sex symbols clearly refer to the fact that *minor* was described from both sexes); in addition it has a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904", which refers to the date of its incorporation into BMNH collection in 1904, and on this label is the extra word "Australia" in pencil in Austen's hand.

Standing in BMNH, London, collection with the paralectotype specimen there is a second ♂ specimen (headless and in bad condition) which was identified later by Macquart and bears his determination label "Rutilia minor. ♀ Macq." (sex sign in error) gummed to a Bigot label on which Bigot has written "nomm. par. Macq. V.Diemen" (this bears also the same type of printed Verrall presentation label as the paralectotype, and on this is the word "Tasmania" in pencil by Austen).

Standing in MNHN, Paris, collection with the four syntypes (i.e. lectotype and three paralectotypes) are five other specimens, which, from their accession date labels and Macquart's later determination labels, are provenly later added material and not type-material. These consist of one ♂ and three ♀ specimens with accession labels "3 47" (the ♂ and two of the females also with Macquart determination labels), and of one other ♂ in very bad condition which has a "4 46" accession label and a Macquart determination label.

Box G.19 of Macquart's collection in MHN, Lille, contains two specimens from Tasmania which are believed to be original syntypes; they have not been seen by me, and their sex is unknown at present.

Townsend (1932 : 39, 1938 : 417) cited a female "Ht" (= holotype) from Tasmania in Paris Museum, but as there are two such females (syntypes) and no means of knowing to which specimen Townsend's statement refers this cannot be accepted as valid lectotype fixation. As it is not a valid fixation, and also as it is undesirable to have a restriction of the name to the female sex, I have here designated a male syntype to be the lectotype.

*Rutilia nigra* Macquart, 1846 : 305 (177). Unavailable *nomen nudum*, cited in the original description of *Rutilia pellucens* Macquart, 1846.

Following the description of *R. pellucens*, Macquart wrote "Il serait possible que l'individu décrit fut le mâle du *R. nigra*; mais jusqu'à de plus amples observations, nous devons les considérer comme espèces distinctes" and this is the only place in the works of Macquart where the name *R. nigra* appears. The description of the male of *pellucens* cannot be held to apply to *nigra*, and the latter name is therefore a *nomen nudum*; Brauer (1899 : 513) cited the name but did not make it available.

The BMNH, London, collection contains two male specimens (standing under the name of, and apparently belonging correctly to, *Rutilia regalis* Guérin-Méneville) which were found by Austen to be standing above the name "Rutilia nigra" in Bigot's collection of Rutiliini when this was incorporated into BMNH in 1904. One of these specimens bears a label "Rutilia nigra n.sp." in Macquart's handwriting, which is gummed to another label from Bigot's collection on which Bigot has written "♂. N.holl. (Coll. Fairmaire) Macq. D.la Nom"; a folded note is also attached to this specimen in the small pencil writing of Austen which reads "N.B. - The above two ♂s were, in the Bigot collection, placed above the appended



label [i.e. Macquart's original label attached to Bigot's label] in Macquart's handwriting, which is mounted on another label, with notes by Bigot. The specimens are referred to by Brauer, Stz. K. Akad. Wiss. Math.-naturw. Cl., CVIII., Abth. I. (1899). p. 513 (bottom of page); but the species appears never to have been described, & the name is consequently a MS one. E.E. Austen, 27.x.04." (Austen evidently did not spot the name *R. nigra* published in the description of *pellucens*.) The specimen with Macquart's and with Austen's labels and the second specimen each have a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904" with the pencilled word "Australia" in Austen's writing. No ♀ specimen has been seen which is labelled as "nigra" by Macquart, although his statement quoted above from the description of *pellucens* implies that he had a ♀ which he regarded as "nigra"; possibly this was in Fairmaire's collection, of which the Diptera appear to be lost (as in the case of the ♂ holotype of *pellucens* itself, q.v.).

***Rutilia nigrithorax*** Macquart, 1851 : 190 (217). LECTOTYPE ♂, by present designation, AUSTRALIA (publ. as 'De l'Océanie'): MNHN, Paris (No. 2316).

Paralectotypes: 4 ♂, same data as lectotype (MNHN); 1 ♀, AUSTRALIA, east coast (MNHN).

The lectotype bears Macquart's label "*Rutilia nigrithorax* ♂♀. [latter symbol cancelled by stroke] Macq. n.sp." and an accession label "4 46", and is in good condition except for loss of both third antennal segments; selected as lectotype despite loss of third antennal segments because it is otherwise by far the best specimen, and antennae can be seen complete on the paralectotypes. All the paralectotypes appear to be conspecific with the lectotype and the males have the same "4 46" accession reference; the ♀ paralectotype has an original Macquart label "*Rutilia nigrithorax* ♀. Macq. n.sp.", an accession label "2 47", and a rectangular white label reading "1142" in faded ink.

This is the species which Paramonov (1968) made type-species of his genus *Ola* Paramonov, and it is known from south-eastern Australia, from Tasmania to New South Wales; Macquart cited the locality as Oceania, but this clearly must refer to Australia, and this is confirmed by the ♀ syntype (listed under paralectotypes above) which has the "2 47" reference alluding to the east coast of "New Holland".

***Rutilia nitens*** Macquart, 1851 : 189 (216). Holotype ♀, INDIA: MNHN, Paris (No. 673).

The holotype bears Macquart's label "*Rutilia nitens*. ♀ Macq. n.sp." and an incompletely legible accession label with (apparently) the numbers "301" followed by two completely unreadable numbers; the condition is very poor, specimen mouldy and dirty, facial regions damaged, left mid leg and right hind leg lost, left fore tibia and tarsus missing, parts of right mid and left hind tarsi also missing, thorax cracked, wings damaged.

***Rutilia oblonga*** Macquart, 1847 : 92 (76). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Rutilia oblonga*. ♂ n.sp. Macq" which is gummed to another label from Bigot's collection with the additional words "Diaphan [this struck through for deletion] (*Diaphania*) N. holland." in Bigot's writing. The condition is fair, some dirtiness, left fore leg lost, right mid tarsus and part of left mid tarsus lost, some chaetotaxy lost, abdomen slightly rubbed.

***Rutilia pellucens*** Macquart, 1846 : 305 (177). Holotype ♂, AUSTRALIA ('Nouvelle-Hollande'): not located, presumed lost.

This species was described from one specimen (this is known from Macquart's statement of "l'individu" in the singular) stated by Macquart to be in Fairmaire's collection; the Diptera from this collection are believed to be lost. However, the BMNH, London, contains five male specimens of *R. pellucens* from Bigot's collection which were identified by Macquart, and one of which has a determination label in Macquart's writing "*Rutilia pellucens* Macq" gummed to another label from Bigot's collection on which Bigot has added "♂ Macq. nomit v. id. D. Exot. Australia"; these specimens were incorporated in BMNH in 1904 and each has printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Australia" in pencil.

The specimens from Bigot's collection which were identified as *pellucens* by Macquart fit

his description perfectly, and, in the absence of the lost holotype, serve to confirm the identity of *pellucens* correctly. There are no specimens of *pellucens* in MNHN Macquart collection.

***Rutilia plumicornis*** Macquart, 1843 : 239 (82). Holotype ♂, NEW GUINEA, Fak-Fak ('Offak'): lost (but see annotation below).

Macquart, in the original description, attributed this name to Guérin-Méneville and based the description on a specimen from "Offak" (in Papua or New Guinea) sent to him by Guérin-Méneville. In his next publication, however, i.e. the 1<sup>e</sup> *Supplément to Diptères exotiques*, Macquart (1846 : 302 (174)) wrote that "L'espèce que nous avons précédemment décrite sous le nom de *R. plumicornis* est la même que la *R. mirabilis*, Guérin, voyage autour du monde de *la Coquille*", and this statement—apart from definitely implying the synonymy of the names—might possibly imply that by some error the descriptions of both nominal species were based on the same specimen.

Guérin-Méneville's name *mirabilis* is also based on a specimen (holotype), which still exists in MNHN, Paris, from Offak, and the name is available from publication of a plate-figure in 1831, though a text description did not appear until the account of the voyage of *La Coquille* was published in 1838. It appears very likely, since Macquart and Guérin-Méneville were closely acquainted, that the specimen that Macquart received from Guérin-Méneville and described as *plumicornis* was the very same specimen that Guérin-Méneville had already described as *mirabilis*, but that Macquart did not realize at the time (1843) when he described *plumicornis* that a name had already been published for the species involved. If this supposition is true, then the extant type-specimen (believed to be holotype) of *mirabilis* is also the holotype of *plumicornis*. However, there is no means of proving this since the *mirabilis* type does not bear any label in Macquart's hand, and it is equally possible that there were originally at least two specimens from Offak of which Guérin-Méneville described one (*mirabilis*) and Macquart another (*plumicornis*), with subsequent loss of all but one specimen. It is considered best to regard the type-material of *plumicornis* as lost, though bearing in mind the possibility that it might actually be represented by the topotypic holotype of *mirabilis*. No practical question of nomenclature is involved, as *plumicornis* is unquestionably a synonym of *mirabilis*, as Macquart himself established in 1846.

***Rutilia rubriceps*** Macquart, 1847 : 92 (76). Holotype ♀, 'TASMANIE' [probably in error, see annotation]: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "Rutilia rubriceps. ♀ n.sp. Macq." which is gummed to another label from Bigot's collection on which the words "nomm. par Macq. V.id. D. Exot. Van Diemen" have been added by Bigot; the holotype is in very good condition, except for the loss of the left fore tarsus and tip of left hind tarsus.

The holotype of this species was incorporated into BMNH, London, collection in 1904, and, in addition to Macquart's label, it bears a pencilled label in Austen's writing "Tasmania. Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904.". Standing with the holotype in Bigot's collection, and now in BMNH, is a male specimen of *rubriceps* which bears the same type of pencilled label in Austen's hand, but this specimen was evidently not seen by Macquart and is not a type-specimen.

There is doubt about the provenance of the holotype (and also of the ♂ specimen from Bigot's collection), because *rubriceps* appears to be a mainland Australian species best known from Queensland; no subsequent material has been seen from Tasmania, and this stated type-locality might be in error.

***Rutilia setosa*** Macquart, 1847 : 94 (78). Syntypes ♀, 'TASMANIE': lost (see annotation).

Macquart described this species from female specimens which he recorded as being in Bigot's collection from Tasmania ("De la Tasmanie. M. Bigot"). At the same time he explained that he had previously thought that these females belonged to another of his species, *Rutilia testacea* (Macquart), but that now (having seen the true females of *testacea*) it was clear that the females having the arista bare and a row of 8–12 strong setae on the middle hind margin of the second abdominal segment were not *testacea* (as he had recorded earlier: Macquart, 1846 : 305 (177)),

but the new species *setosa*; hence the statement "Rutilia testacea ♀. Macq." cited beneath the name "Rutilia setosa, Nob." heading the original description of *setosa*.

Unfortunately no female specimens of Rutiliini now exist from Bigot's collection (in BMNH, London) which fit with Macquart's description of *R. setosa*, nor are there any specimens labelled by Macquart as either *setosa* or *testacea* (although there are correctly identified males of the latter species from Bigot's collection in BMNH). It must be concluded that the type-material of *R. setosa*, which consisted of female syntypes, is lost. (The evidence that it consisted of syntypes comes from Macquart's statement under the heading *R. testacea*, following the original description of *R. setosa*, that "Nous croyons qu'elles [i.e. true *testacea* females] sont les femelles du *R. Testacea*, et que celles que nous avons considérées comme telles, et qui appartiennent à une espèce nouvelle, a là *setosa*".)

In the earlier Macquart (1846 : 305 (177)) work dealing with supposed females of *R. testacea* he appears to imply that the specimens are in Paris Museum, and the MNHN Macquart collection has therefore been checked for any specimens that could possibly be types of *R. setosa* (in case, for example, the statement of "M. Bigot" in the original description of *setosa* was an error for "Muséum"); however, there are no specimens in Paris that could be *setosa* types, which supports the conclusion above that the actual type-material is now lost.

***Rutilia subtustomentosa*** Macquart, 1851 : 191 (218). Holotype ♂, TASMANIA: MNHN, Paris (No. 2323).

The holotype bears Macquart's label "*Rutilia subtustomentosa* ♂. Macq. n.sp.", and an accession label "3 47", and is in perfect condition. It may be noted that the specific name is not hyphenated on Macquart's label, but was hyphenated in the original publication.

***Rutilia viridinigra*** Macquart, 1846 : 307 (179). LECTOTYPE ♀, by present designation, TASMANIA: MNHN, Paris (No. 2318).

Paralectotypes: 1 ♀, same data as lectotype (MNHN); 1 ♀, Tasmania or Australia (MNHN); 1 ♀, 'Sydney' (BMNH, ex coll. Bigot).

The lectotype bears Macquart's label "*Rutilia viridinigra* Macq. n.sp." and an accession label "13 44", and is in good condition except for loss of hind legs and some scutellar setae. One of the paralectotypes in MNHN has the same "13 44" accession reference as the lectotype, but the other has an accession label "229 35".

The ♀ paralectotype in BMNH from Bigot's collection is correctly associated with the lectotype, and bears an original Macquart label "*Rutilia viridinigra* ♀. Macq. n.sp" which is gummed to another label from Bigot's collection on which Bigot has added in his writing the words "Sydney" and "Nomm. par. Macq."; although in the original description Macquart only mentioned the locality "Tasmanie", this ♀ is nevertheless considered to be an original syntype because of the original Macquart label which it bears, and also because there is often doubt about the accuracy of Bigot's localities (the "Sydney" in his writing could be in error). Furthermore, as Macquart described the species from "plusieurs individus" it is possible that he did not record all the localities. The original Macquart label is accepted as conclusive evidence that the Bigot specimen is an original one.

Standing with the syntype series in MNHN, Paris, there is another ♀ specimen, but this has an accession label "4 46" and is not an original specimen; in the same collection there is a ♂ specimen with "4 46" accession reference, and this also is not part of the original material (it is probably the male which Macquart, 1851 : 192 (219) described later in the 4<sup>e</sup> *Supplément*). The BMNH collection contains one ♀ specimen received in exchange with Paris Museum in 1924 and bearing the "4 46" accession reference of that Museum; it has no type-status.

***Rutilia viriditestacea*** Macquart, 1851 : 190 (217). LECTOTYPE ♂, by present designation, TASMANIA: MNHN, Paris (No. 2321).

Paralectotype: 1 ♂, same data as lectotype (MNHN).

The lectotype bears Macquart's label "*Rutilia viriditestacea*. Macq. n.sp. ♂.", and an accession label "3 47", and is in very good condition (except for a few small holes in the thorax).

The paralectotype specimen is labelled "3 47" like the lectotype, but is incorrectly associated with the lectotype (having narrower frons, all dark thoracic hair, lacking bluish violet reflections).



Standing in MNHN collection with the syntype specimens there are two unlabelled and wrongly associated male specimens, which appear without doubt to have been added later to the collection; they have therefore no type-status.

***Rutilia vittata*** Macquart, 1855 : 126 (106). Holotype ♀, SOUTH AUSTRALIA ('colonie d'Adélaïde'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Rutilia vittata* ♀. Macq" and is in fair condition except for loss of both fore legs, right mid leg, and tips of hind tarsi, and damage to scutellum and right wing. Macquart's label lacks the usual "n.sp." inscription.

The holotype of this species was incorporated into BMNH, London, collection in 1904, and has a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "S.Australia." in pencil.

***Senostoma variegata*** Macquart, 1847 : 96 (80). Holotype ♀, TASMANIA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Senostoma variegata*. ♀ n.g., n.sp. Macq."; it is in very bad condition, both third antennal segments, both fore legs, right mid leg and left hind leg missing, body dirty and greasy, some chaetotaxy lost, hole in scutum and scutellar base.

Townsend (1932 : 40, 1938 : 426) referred to a specimen, which I have not seen, in the Naturhistorisches Museum, Vienna, as being the female holotype from Tasmania of *S. variegata*, and (in the 1932 paper) stated that it is labelled "*variegata* Macq. Type Bigot". This is almost certainly a label attached to a specimen by Brauer, and cannot signify the true type of Macquart, which (as shown above) bears Macquart's own label and is still correctly present among Bigot's material in BMNH, London. Brauer's meaning of the word "Type" is undoubtedly different from present usage, and it is quite certain that the specimen in Vienna recorded by Townsend is both wrongly identified and not a type of *Senostoma variegata*. *S. variegata* is type-species of *Senostoma* Macquart and Macquart's original label on the holotype bears the formula "n.g." as well as "n.sp.". For many years the generic name *Senostoma* was mis-applied to a genus of Rutiliini, but *Senostoma* although belonging in the subfamily Proseninae is not a Rutiliine, and Paramonov (1968 : 384) has recently and rightly drawn attention to this.

***Sumpigaster fasciatus*** Macquart, 1855 : 125 (105). Holotype ♂, QUEENSLAND, Moreton Bay: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Sumpigaster fasciatus* ♂. n.g., n.sp. Macq"; it is in extremely bad condition, body largely concealed (less so on abdomen) in mould, all legs lost except left hind leg, eyes partially collapsed, some chaetotaxy (including all scutellar bristles) lost.

Macquart published the locality as "De l'Océanie. Moreton-Bay."

***Tachina cilipes*** Macquart, 1843 : 219 (62). Holotype ♂, EAST INDIES (*Marc*): MNHN, Paris (No. 672).

The holotype bears an original label in Macquart's writing reading "No. 18 *Tachina cilipes*", and an accession label "1196 36"; it is in poor condition, head glued to thorax (but certainly correctly associated), body dirty, chaetotaxy of frons, mesonotum and scutellum rubbed off, right third antennal segment and the left fore and right mid legs missing.

***Tachina javana*** Macquart, 1851 : 177 (204). Holotype ♂, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Tachina javana* ♂, Macq. n.sp." and is in good condition except for loss of right third antennal segment and left mid leg, small hole in scutum and loss of a few setae.

Standing with the holotype in BMNH there are two other ♂ specimens from the Bigot collection, but as there is no definite evidence that Macquart saw these specimens they are excluded from the type-series.

This name is here considered *not* to be a homonym of *Tachina iavana* Wiedemann, 1819,

even though both names allude to Java, because the "i" and the "j" difference is not one of the cases of variable spelling covered by Article 53 of the *International Code of Zoological Nomenclature*, 1961, but undoubtedly the names ought to be considered homonyms by the spirit, if not the letter, of this Article.

***Teretrophora fasciata*** Macquart, 1851 : 175 (202). Holotype ♀, TASMANIA: MNHN, Paris (No. 2292).

The holotype bears Macquart's label "*Teretrophora fasciata*. ♀ Macq. n.g., n.sp. Tasm." and an accession label "3 47"; it is in appalling condition, mounted very near head of very long pin and completely coated in and obscured by brittle deposit and mould, with legs stuck down to body, the features only discernible with greatest difficulty; legs appear to be almost complete, though tips of several tarsi missing. Townsend (1932 : 48) described the holotype as "covered with mycelia and grime".

This is type-species of *Teretrophora* Macquart, a genus which has remained enigmatic since its description. Fortunately, despite the condition, the holotype shows a very striking feature in the extraordinarily elongate and conical fifth tergite and elongate ovipositor, and it has now been possible to identify recently collected specimens from New South Wales which show this feature as *T. fasciata*, and to confirm other features on the holotype by prising off small pieces of the brittle deposit which invests the specimen. The type-locality is accepted as Tasmania as given by Macquart, but confirmation is required by future collecting of this species.

***Toxocnemis vittata*** Macquart, 1855 : 124 (104). Holotype ♂, SOUTH AUSTRALIA ('Colonie d'Adélaïde'): BMNH, London (ex coll. Bigot).

The holotype bears Macquart's label "*Toxocnemis vittata*. ♂. Macq. n.g."; it is in good condition except for a thin covering of mould and loss of the right mid leg.

This is type-species of *Toxocnemis* Macquart and Macquart's original label bears the "n.g." formula indicating the new genus; the label, however, lacks the usual "n.sp." but this may be due to subsequent cutting off to reduce label size (for instance by Bigot, who appears at times to have reduced the size of some of Macquart's original labels).

***Trichostylum rufipalpis*** Macquart, 1851 : 182 (209). Holotype ♀, AUSTRALIA ('Nouvelle-Hollande, côte orientale': probably New South Wales or Queensland): MNHN, Paris (No. 2306).

The holotype bears Macquart's label "*Trichostylum rufipalpis*. ♂ n.g., n.sp. Macq." and an accession label "2 47"; it is in fair condition, left side of head dirty, both fore legs and right mid leg lost, tips of remaining left tarsi lost, scutum slightly rubbed.

***Tritaxys australis*** Macquart, 1847 : 82 (66). LECTOTYPE ♂, by present designation, TASMANIA: BMNH, London (ex coll. Bigot).

Paralectotypes: 1 ♂, 1 ♀, same data as lectotype (BMNH).

The type-material of this species consists of two male syntypes and one female syntype which were incorporated into the BMNH collection from Bigot's collection in 1904, and each syntype bears a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which the word "Tasmania" has been added by Austen in pencil, and each has also a circular yellow-edged "Co-type" label on which Austen has written "*Tritaxys australis* Macq." in ink; none of the specimens (though they are undoubtedly all original syntypes) has a label by Macquart although it is reasonable to assume that there was originally such a label but that this has been lost (*T. australis* appears to be the only Old World nominal species described by Macquart of which his original label is missing from the primary type).

The lectotype is in bad condition, body dirty with legs and abdomen partly invested in glue, both arista and mid tarsi lost, left wing missing, hole in scutellum; the paralectotypes are also in very bad condition, and the female lacks the abdomen and third antennal segments, but the male paralectotype (though the head is dirty and much distorted) possesses both arista.

Townsend (1941 : 75) referred to "Ht from Tasmania, in Newmarket" for *T. australis*, but as it is impossible to tell from this statement which sex and specimen Townsend was referring to there is no valid lectotype fixation; a lectotype is therefore here designated.

## PART II—BIGOT

## BIGOT'S WORK AND RECOGNITION OF HIS TYPE-MATERIAL

Jacques Marie Frangile Bigot was born in 1818 and died, after an attack of influenza, on 14th April 1893 at his country estate of Petit-Quincy (near Brunoy, Seine-et-Oise) on the southern outskirts of Paris; here he had lived and worked most of his life, except when wintering in Algiers. Bigot's lifelong interest was in the Diptera; at the age of 26 he became a member of the *Société entomologique de France*, and in the following year (1845) he published the first of his long series of papers on Diptera in the *Annales* (and associated *Bulletin des Séances*) of that Society.

Macquart (1848 : 161 (1)), at the time when Bigot was 30 years old, wrote of him as a young scholar who was a hope of French entomology, but it is fair to say that the promise shown by Bigot's early works was not maintained; he became a dilettante dipterist, toying with descriptive work at a very superficial level, and in the later years of his lifetime was criticized for this (an obituary notice in *The Entomologist's Monthly Magazine*, 1893, 29 : 145, records that "the quality of his work did not find favour amongst the students of that Order [Diptera], and did not escape severe criticism"). Osten Sacken (1904 : 232), who was long acquainted with Bigot, tells how he once told Bigot that his most useful work had been in accumulating a large collection of exotic Diptera and how it would be a gain for science if almost all of Bigot's publications could be suppressed: harsh though this judgement sounds, it does not lack justification, for without reference to the type-specimens it is virtually impossible to recognize any of the genera and species which Bigot described, though the collection assembled by Bigot (which contains his types) is invaluable.

Bigot formed his collection from specimens received from all parts of the world, but it became extremely rich in material from the Americas, and the species which he described from Mexico, Central and South America exceed in number those from all other parts of the world together. The importance of his collection was widely recognized, and when Bigot's death was announced on 26th April 1893 at a meeting of the *Société entomologique de France* (see *Bull. Soc. ent. Fr.* 1893 : clxxxvii) the President, Lefèvre, remarked that "La Collection de Bigot a une valeur scientifique de premier ordre, car elle contient un nombre considérable de *types*" and added the hope that the Muséum d'Histoire Naturelle in Paris would find the means to acquire the collection. Osten Sacken, too, urged the authorities of the Paris Museum to buy the Bigot collection, but they were unable or unwilling to offer the 8,000 francs which Bigot himself had fixed as the minimum sale price, and offered instead only 5,000 francs (see *Bull. Soc. ent. Fr.* 1893 : ccxx); in the absence of a sale to the Muséum d'Histoire Naturelle in Paris, the Bigot collection was bought, on the advice of Osten Sacken, by the English dipterist G. H. Verrall, for the 8,000 francs required by Bigot's heirs. Bigot's collection then came to Verrall's home at Newmarket, England, in June 1893; but Verrall gave Osten Sacken to understand that the collection would ultimately find its place in the British Museum (Osten Sacken, 1904 : 232).

Unfortunately it now appears unlikely that Verrall's apparent intentions about



Bigot's collection will be fulfilled, and improbable that all the collection will find its way to the British Museum (Natural History). Following on Verrall's death in 1911, the Bigot collection passed to his nephew, J. E. Collin, who continued to house most of it at Newmarket, but the collection has now become divided; in 1960 the Nematocera, Calyptrata and some Brachycera from the collection (approximately 6,000 specimens, BMNH registration no. B. M. 1960-539) were transferred by Collin from his possession to the British Museum (Natural History), where they will now remain, but the rest of Bigot's collection (which Collin did not transfer to the BMNH in 1960) passed to the Hope Department of Entomology, at the Oxford University Museum, when Collin died in 1968.

The very large part of Bigot's collection which came to the British Museum (Natural History) in 1960 is being gradually incorporated into the general Diptera collection of the Museum, but only after careful study of the specimens to ensure that their type status (if any) is correctly determined and after careful and appropriate labelling of each specimen. For the Tachinidae from Bigot's collection, all of which are in the BMNH, all the Old World specimens (including the types) have now been incorporated, and all of the type-specimens of New World forms.

The great importance of Bigot's collection lies in the fact that it contained not only the types of the large number of nominal species described by Bigot himself, but also the types of a very large number of species described by Macquart (1846-1855) in the *Suppléments* to his works on the *Diptères exotiques nouveaux ou peu connus* (in the case of the Tachinidae, such Macquart types are now incorporated in the British Museum (Natural History) collection). The specimens which Macquart described from Bigot's collection were loaned to him for study by Bigot, who was a young man just beginning to assemble his collection at the time when Macquart was publishing his *Suppléments* (Bigot was forty years younger than Macquart).

The recognition of Macquart's types in Bigot's collection has been considered earlier in Part I, and the following notes are concerned only with the recognition of the types of Bigot's own nominal species. Bigot was in every respect a much more casual worker than Macquart, and his type-specimens were not labelled to show their status (e.g. with "n.sp." or some equivalent), in the way that Macquart had labelled at least one specimen of his own type-series; indeed, the vast majority of Bigot's specimens stood in his collection (and still stand in those parts of the collection not yet incorporated into the BMNH general collection) without any labels at all on the specimens themselves. Bigot's method of indicating identity was to place a specific name label below the specimen(s) and a generic name label above, the standard labels being rectangular in form with a narrow black border, as shown in Plate 1, G and H. Specific labels are white, and generic labels yellow or pale yellow; the specific labels show the generic initial letter, the specific name (commencing normally with a capital letter), and the sex symbol towards the top, the type-locality on the bottom left and Bigot's name and "J." initial on the bottom right of the label (though some variations from this usual arrangement are found) (Plate 1, H); the generic labels show the letter "G." followed by the generic name at the centre of the label, and the generic author's name at the bottom right (Plate 1, G). The writing on the labels is in black ink in Bigot's own hand.

It is important to note here that some specimens from the New World in Bigot's collection (especially among the Tachinidae) carry a completely different kind of label from that described above, attached to the pin of the specimen. This second kind of label consists of a piece of white or blue paper bearing an inscription in Bigot's spidery handwriting in either purple or black ink. The information given on each label of this kind comprises a generic and specific name, a sex symbol (sometimes omitted), an inscription indicating an unpublished new species, a statement apparently indicating when Bigot acquired the specimen for his collection at Quincy, and a locality of origin. The inscription showing that the specimen was of an unpublished new species is always given on this kind of label as "n.sp. inedict." (= unpublished), and it seems clear that Bigot intended such labels to be temporary until the species concerned had been described. I at first thought that all names found on specimens labelled in this way were unpublished manuscript names, and therefore that none of the specimens involved could have any type-status, but I have now found that Bigot did in fact publish a few of the names in papers dealing with New World forms: a few of Bigot's types of Tachinidae from the Americas therefore carry the kind of "manuscript" label just described.

With the foregoing details about Bigot's labelling in mind it is normally possible to be certain that the type-material of his described species is correctly recognized, even though he labelled them so poorly and never as types. Often his published descriptions indicate the number of specimens he had available and holotype or syntype status is then easily determinable, and for those nominal species for which he did not indicate how many specimens he had it is usually possible to accept all specimens standing under the name as holotype or syntypes (except very occasionally when one or more specimens bears some unusual label indicating a different locality from that published for the type-material, when such specimens must be excluded from the type-series). It is important to note here that discrepancy between the actual sex of the types and the sex published by Bigot is common in Bigot's works, for, with all his experience as a dipterist, he was either notoriously unable to recognize sex accurately or very careless in recording it. The provenance of Bigot's type-specimens is normally only known to the country, only a few specimens having locality data which pinpoint the type-locality more accurately: in general, the localities cited by Bigot in publication and on his labels are—so far as they go—correct, but some errors clearly exist.

A part of Bigot's collection of Tachinidae was transferred from Newmarket to the British Museum (Natural History) in 1904, as the result (it is inferred) of a special arrangement made between Verrall and E. E. Austen. The accession register of the BMNH for the year 1904 records (under serial number 274) that G. H. Verrall presented 187 specimens of Australian and Austromalayan *Rutilia*, *Formosia* and allied genera to the Museum in October of that year; these specimens are still in BMNH and they represent all the Rutiliini and some other Prosenines that were in Bigot's collection. Each of the specimens that came to the BMNH collection in this consignment has a printed accession label which reads "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904. 1904-274.", and on each such label there is usually a locality indicated in pencil in Austen's writing. All of Bigot's Rutiliine types, and

a few others, have such labels (in addition to Bigot's own labels from his collection), as indicated where appropriate in the account of Bigot's types that follows (but I have, in the latter, omitted the "1904-274" accession reference which occurs on the labels in the interest of brevity).

Specimens which Townsend in the *Manual of Myiology* (and also elsewhere in a few of his papers) records as in "Newmarket" are now to be found in the BMNH collection, following the presentation of the Tachinidae of Bigot's collection to the British Museum (Natural History) in 1960.

All Tachinid specimens from Bigot's collection (omitting those above mentioned that were received in 1904) that have already been incorporated into the general collection of the British Museum (Natural History)—which includes *all* of his Tachinid types—have been labelled with a printed label reading "ex. Bigot Coll: B.M. 1960-539." on which the name, sex, type-status (if any), and locality have been added in black ink. I have not thought it necessary to quote these recent incorporation labels in the information on Bigot's types which follows, since they all have the same standard form.

#### BIGOT'S TYPE-MATERIAL OF AUSTRALASIAN, ORIENTAL AND ETHIOPIAN TACHINIDAE

[Note: the following list includes in square brackets those nominal species which are *not* Tachinidae, but which might be assumed to belong to this family because of their original generic assignments by Bigot.]

***Atractodexia argentifera*** Bigot, 1885c : xxxii. Holotype ♂, NEW CALEDONIA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "A. argentifera. ♂. Nouv. Caledon. J. Bigot." and his yellow generic label reading "G. Atractodexia. J. Bigot."; it is in good condition except for loss of right fore leg and apex of left mid tarsus. The head has at some time been glued back to thorax.

***Bogosia rufiventris*** Bigot, 1876 : 399. Holotype ♂, SOUTH AFRICA, Natal: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "B. Rufiventris. ♂. Natal. J. Bigot." and is in good condition except for loss of right mid leg and apices of some tarsi.

***Chetogena tricolor*** Bigot, 1891 : 377. Holotype ♂, IVORY COAST, Assinie: not located, presumed lost.

I have been unable to find the holotype of *Chetogena tricolor* while incorporating Bigot's Tachinid collection into BMNH, and believe that it must be lost. In the absence of the type the generic position is completely uncertain, and there is even some doubt as to whether *C. tricolor* Bigot is a Tachinid.

***Crossotocnema javana*** Bigot, 1885e : ccii. Holotype ♀, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "C. Javana. ♀ Java. J. Bigot." and his yellow generic label "G. Crossotocnema. J. Bigot."; it is in fair condition, but both fore legs, the left mid leg and right hind leg are lost.

The holotype has long soft entirely white hair on the pleural regions (as also on the scutum); Mesnil's (1949 : 80-81) use of *javana* Bigot, which he places in his key as a species with brownish black mesopleural hair, appears to be a misidentification.



*Dejeania crocea* Bigot, 1888 : 77. LECTOTYPE ♀, by present designation, SOUTH AFRICA, Cape of Good Hope: BMNH, London (ex coll. Bigot).

Paralectotypes: 3 ♀, same data as lectotype (BMNH).

This species was described by Bigot from four specimens (syntypes) for which he indicated the sex as "♂, ♀?"; all four specimens are in BMNH ex coll. Bigot and all are females, as van Emden (1960 : 474) has also noted. Each syntype has a label "Brauer WIEN. CVII. (No. 57)", but the original name label as *D. crocea* (which van Emden, loc. cit., records as "D.crocea ♂ F.Big. A.Cap. B. Esp.") was not found in Bigot's collection when this came to BMNH in 1960. All four syntypes are in bad condition; the specimen selected and here designated as lectotype has been chosen because it retains the antennae and palpi complete, but it is dirty with some glue on the thorax and abdominal base, has lost the left mid leg and right wing, and has the chaetotaxy disarranged; the paralectotypes show a few features better than the lectotype, but lack several legs and parts of the head, and one is much greased and the others eaten out. The paralectotypes are all conspecific with the lectotype.

*Doleschalla consobrina* Bigot, 1888 : 98. Holotype ♂, MOLUCCA ISLANDS: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "D. Consobrina. ♂. Moluques. J. Bigot" and his yellow generic label "G. Doleschalla. Walker."; it is in fair condition, except for some dirtiness with mould and loss of left fore leg and right hind leg.

The holotype of this species was incorporated into BMNH collection in 1904, and bears a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Molucca Is." in pencil.

*Doleschalla maculifera* Bigot, 1888 : 100. Holotype ♀, NEW GUINEA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "D.maculifera. ♀. Nouv. Guinée. J. Bigot" and a small rectangular white label with the printed word "N-GUIN" (i.e. New Guinea). It is in dreadful condition, all that remains being distorted head and thorax both completely concealed in thick mould, both fore legs and left mid leg (legs also mouldy); one wing also remains, this gummed to Bigot's name label.

The holotype specimen was evidently in very bad condition when first described, as Bigot headed the Latin description with the word "Detrita", and the following French description with the word "Détérioré".

*Doleschalla nigra* Bigot, 1888 : 98. Holotype ♀, MOLUCCA ISLANDS: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "D. Nigra. ♂. Moluques. J. Bigot" on which the generic name has been completed by the addition of "oleschalla" in an unknown handwriting; it is in fair condition, slightly mouldy, left fore leg and right fore tarsus lost, right mid and hind legs lost.

The holotype of this species was incorporated into BMNH collection in 1904, and bears a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Molucca Is." in pencil.

*Doleschalla picta* Bigot, 1888 : 99. LECTOTYPE ♂, by present designation, NEW GUINEA: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♂, same data as lectotype (BMNH).

The lectotype bears Bigot's label "D. ? Picta. ♂. Nouv. Guinée. J. Bigot." and a small rectangular white label with the printed word "N-GUIN" (i.e. New Guinea); it is in fair condition except for some mould on the thorax, loss of left third antennal segment, loss of both mid legs and left hind leg, and some damage to wings. The ♂ paralectotype is conspecific with the lectotype; it lacks the data labels mentioned for lectotype, and is in poor condition with head and thorax covered in mould, and both wings and several legs missing.

Bigot was doubtful of the assignment to *Doleschalla* and headed the description "D.? picta", also putting the question-mark on his name label. The provenance he cited as

"Nouvelle-Guinée: Batchian", and New Guinea is here accepted as type-locality (not Batjan Island = Batchian) as there is an old label on one of the syntypes indicating New Guinea, and Bigot himself put this as the locality on his own label.

***Doleschalla venosa*** Bigot, 1888 : 100. Holotype ♀, NEW GUINEA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "D. Venosa. ♂. Nouv. Guinée. J. Bigot." and a small rectangular white label with the printed word "N-GUIN" (i.e. New Guinea); it is in fair condition, slightly dirty, right fore and hind legs and ring lost.

The holotype of this species was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "New Guinea" in pencil.

***Echinomyia flavopilosa*** Bigot, 1888 : 80. Holotype ♂, JAVA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "E. flavopilosa. ♂. Java. J. Bigot." and is in fair condition, slightly mouldy, legs lost except for left fore and hind legs, left third antennal segment lost, body slightly greasy.

***Exorista melas*** Bigot, 1889 : 256. Holotype ♀, TASMANIA ('Van-Diemen'): not located, presumed lost.

I have been unable to find the holotype of *Exorista melas* while incorporating Bigot's Tachinid collection into BMNH, and believe that it must be lost. In the absence of the type the generic position is completely uncertain. Bigot added the word "Detrita" after the Latin description of *melas*, and the holotype specimen was presumably therefore in very bad condition when described.

***Exorista ornata*** Bigot, 1889 : 256. Holotype ♀ [not ♂], INDIA ('Indes'): BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "D. Ornata ♂ (olim. Exorista id. J. Bigot) J. Bigot. Inde", on which "exiosoma" has been added to the generic initial letter (making "Dexiosoma") in an unknown handwriting; it is in good condition except for a hole in the scutum and loss of part of the right fore tarsus.

The holotype of this species was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "India." in pencil.

***Formosia papua*** Bigot, 1880 : 87. LECTOTYPE ♀ [not ♂], by present designation, NEW GUINEA (*L. Laglaise*): BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♀, same data as lectotype (BMNH).

The lectotype bears Bigot's label "F. papua. ♂. Nov. Guinea. Mas. J. Bigot." and is in good condition except for loss of both mid legs. The ♀ paralectotype is correctly associated with the lectotype, and is a slightly teneral specimen with collapsed facial region and right mid and left hind legs missing.

The syntypes of this species were incorporated into the BMNH collection in 1904, and each bears a printed label reading "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "New Guinea. L. Laglaise." in pencil. Both are ♀, not ♂ as published and labelled by Bigot.

***Formosia smaragdifera*** Bigot, 1874 : 462. LECTOTYPE ♂, by present designation, MOLUCCAS, Batjan ('Batchian'): BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♀, same data as lectotype (BMNH).

The lectotype is in very good condition except for loss of the left third antennal segment and the left hind leg. The ♀ paralectotype is conspecific with the lectotype and is in fair condition, slightly flattened, right third antennal segment lost, both mid legs and right hind leg lost. In the original description of the male Bigot mentioned the presence of eight macrochaetae on the middle of the hind margin of the second (i.e. T<sub>3</sub>) abdominal segment, but this feature occurs actually in the ♀ syntype and not the ♂.

The syntypes of this species were incorporated into the BMNH collection in 1904, and each bears a printed label reading "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Batjan, Molucca Is." in pencil.

Standing with the type-material in the BMNH collection are two other conspecific female specimens from Bigot's collection which were incorporated into the BMNH collection in 1904, and bear the same type of printed label as the syntypes; neither of these specimens is part of the original type-material, and both are from the island of Ternate; Austen's pencilled words "Ternate, Molucca Is." are present on the printed labels, and one of the two specimens also has an old very faded printed label reading "Ternate".

***Formosia variegata*** Bigot, 1874 : 461. LECTOTYPE ♀, by present designation, AUSTRALIA: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♀, same data as lectotype (BMNH).

The lectotype bears Bigot's label "F. Variegata. ♀. J. Bigot. N. Holl."; it is in fair condition, left fore and right mid legs lost, apices of right fore tarsus and left mid tarsus lost, right third antennal segment lost. The paralectotype ♀ is correctly associated with the lectotype, and is the smaller specimen which Bigot referred to at the end of his main description and which he thought (wrongly) might be the male.

The syntypes of this species were incorporated into the BMNH collection in 1904, and each bears a printed label reading "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Australia." in pencil.

***Formosia velutina*** Bigot, 1874 : 463. LECTOTYPE ♀, by present designation, TASMANIA: BMNH, London (ex coll. Bigot).

Paralectotypes: 2 ♀, same data as lectotype (BMNH).

The lectotype bears Bigot's label "F. Velutina. ♀. J. Bigot. V. Diemen." on which the generic name has been completed by the addition of "ormosia" in an unknown hand; it is in very good condition. Both paralectotypes are in fairly good condition and correctly associated with the lectotype.

The type-material of this species was incorporated into the BMNH collection in 1904, and each of the three original syntypes bears a printed label "Ex coll. Bigot. Pres. by G. H. Verrall, Oct. 1904." on which Austen has added "Tasmania." in pencil.

***Formosia viridithorax*** Bigot, 1874 : 457. Unavailable *nomen nudum*, cited in list of the species of *Formosia* Guérin-Méneville and attributed in error to Macquart.

[***Frerea tetropsis*** Bigot, 1891 : 376. Not Tachinidae: belongs in Calliphoridae, tribe Rhiniini, valid species of *Rhyncomya* Robineau-Desvoidy, see Zumpt (1958 : 135) (holotype ♀ from Assinie, West Africa, in BMNH, London, ex coll. Bigot examined).]

***Glossidionophora bicolor*** Bigot, 1885d : lv. Holotype ♀, AUSTRALIA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "G. Bicolor. ♀. Australia J. Bigot."; it is in fair condition, slightly collapsed and teneral, right third antennal segment and right fore tarsus lost, slightly dirty.

Paramonov (1956 : 368) assigned *bicolor* to the genus *Cylindromyia* Meigen and pointed out that the name was then a junior secondary homonym in this genus, but he did not provide a replacement name; none is proposed at the present time, pending future study of the genera of Cylindromyini. Paramonov (loc. cit.) incorrectly stated that Bigot made *bicolor* the type-species of *Glossidionophora* Bigot (which contained two original species): see Crosskey (1967a : 4).

[***Homodexia obscuripennis*** Bigot, 1885b : xxvi. Not Tachinidae: belongs in Calliphoridae, tribe Calliphorini, nominal species of the genus *Bengalia* Robineau-Desvoidy, see Senior White *et al.* (1940 : 91) (holotype ♂ [not ♀] from Ceylon in BMNH, London, ex coll. Bigot examined).]

***Ocyptera tristis*** Bigot, 1878 : 45. Holotype ♂, 'AUSTRALIA' (perhaps in error): BMNH, London (ex coll. Bigot).



The holotype bears Bigot's label "O. Tristis. ♀. Australia. J. Bigot."; it is in fair condition, except for loss of right mid leg, both hind tarsi and apices of fore tarsi.

Although no other specimens are known which belong to this species, the general appearance of this *Cylindromyiine* resembles that of *Gerocyptera* Townsend species from the East Indian Archipelago and the western Pacific rather than an Australian species; the cited provenance of Australia is possibly, therefore, not quite correct.

***Rhynchiodesia tenuipes*** Bigot, 1885a : xi. Holotype ♀, NEW CALEDONIA: BMNH, London (ex coll. Bigot).

The holotype does not bear any name label from Bigot's collection, but was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G.H.Verrall, Oct.1904." on which Austen has added "New Caledonia, Oceania." in pencil. The condition is fair, except for loss of right mid and hind legs and of left hind tarsus, loss of tip of right wing, and partially collapsed eyes.

***Rutilia argentifera*** Bigot, 1874 : 464. LECTOTYPE ♂, by present designation, NEW SOUTH WALES, Sydney: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♂, same data as lectotype (BMNH).

The lectotype bears Bigot's label "R. Argentifera. ♂. J. Bigot. Sydney" and is in good condition except for loss of right mid and hind legs and tip of left hind tarsus. The ♂ paralectotype is conspecific with the lectotype, and in good condition except for left wing broken loose basally, and missing right hind tarsus, left mid tarsus, left hind tibia and tarsus.

The type-material of this species was incorporated into the BMNH collection in 1904, and each syntype bears a printed label reading "Ex coll. Bigot. Pres. by G.H.Verrall, Oct. 1904." on which Austen has added "Sydney, New South Wales." in pencil.

***Rutilia castanifrons*** Bigot, 1880 : 88. Holotype ♀, AUSTRALIA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "R. Castanifrons. ♀. Australia. J. Bigot." on which Austen has written in pencil "(Original label, in Bigot's handwriting.) E.E.A. 5.x.04."; it is a discoloured and teneral specimen, slightly collapsed with left costal margin torn medially, but is in good condition in the sense that all structures are present.

The holotype was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G.H. Verrall, Oct.1904." on which Austen has added "Australia." in pencil.

***Rutilia castanipes*** Bigot, 1880 : 87. LECTOTYPE ♀, by present designation, AUSTRALIA: BMNH, London (ex coll. Bigot).

Paralectotypes: 2 ♂, 1 ♀, same data as lectotype (BMNH).

The lectotype bears Bigot's label "R. Castanipes. ♀. Australia. J. Bigot." on which Austen has added in pencil "(Original, label in Bigot's handwriting) E.E.A. 5.xi.04."; it is in fair condition, dirty and greased, both wings damaged, right mid and hind tarsi lost, left hind tarsus lost except for basitarsus. The paralectotypes appear to be conspecific with the lectotype and are in rather poor condition; one of the ♂ paralectotypes (one lacking the left wing) bears an exactly similar label in Bigot's writing to that on the lectotype (cited above) except that the sex symbol is given as '♂'.

The type-material of *castanipes* was incorporated into the BMNH collection in 1904, and each of the four syntypes bears a printed label reading "Ex coll. Bigot. Pres. by G.H. Verrall, Oct.1904." on which Austen has added "Australia." in pencil.

***Rutilia echinomides*** Bigot, 1874 : 466. Holotype ♀, AUSTRALIA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "R. Echinomides. ♀. J. Bigot. N. holl." on which Austen has written in pencil "(Original label, in Bigot's handwriting) E.E.A. 5.x.04."; it is in fair condition, thorax and abdomen very greasy, some damage in prescutellar region, right third antennal segment and right fore leg lost (the specimen was not in good condition when described as Bigot recorded it as "en assez mauvais état").

The holotype was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G.H. Verrall, Oct.1904." on which Austen has added "Australia." in pencil.

***Rutilia fulviventris*** Bigot, 1874 : 465. LECTOTYPE ♀, by present designation, TASMANIA: BMNH, London (ex coll. Bigot).

Paralectotypes: 3 ♀, same data as lectotype (BMNH).

The lectotype bears Bigot's label "R. Fulviventris. ♂.♀. J.Bigot. V.Diemen.", and is in very good condition. The paralectotypes are conspecific with the lectotype, and in fair condition except that one has lost the abdomen.

The type-material of this species was incorporated into the BMNH collection in 1904, and each syntype bears a printed label reading "Ex coll. Bigot. Pres. by G.H.Verrall, Oct.1904." on which Austen has added "Tasmania." in pencil.

***Rutilia ruficornis*** Bigot, 1880 : 88. Holotype ♂. AUSTRALIA: BMNH, London (ex coll. Bigot).

The holotype bears Bigot's label "R. Ruficornis. ♀. Australia. J. Bigot." on which Austen has written in pencil "(Original label, in Bigot's handwriting) E.E.A. 5.x.04"; it is in poor condition, teneral specimen, head dirty with mould, left thorax dirty with glue, scutum and scutellum smashed, right wing broken, right fore and mid legs lost, left fore tarsus and both hind tarsi missing except for basitarsal segment. The sex is ♂ as Bigot correctly cited in the description: the '♀' indication on his label is in error.

The holotype of this species was incorporated into the BMNH collection in 1904, and bears a printed label reading "Ex coll. Bigot. Pres. by G.H.Verrall, Oct. 1904." on which Austen has added "Australia." in pencil.

This name is a junior secondary homonym of *R. ruficornis* (Macquart) but no replacement name is proposed as it is believed that another of Bigot's names is a synonym of *ruficornis* Bigot, which will be available as replacement name.

***Rutilia semifulva*** Bigot, 1880 : 89. LECTOTYPE ♂, by present designation, AUSTRALIA: BMNH, London (ex coll. Bigot).

Paralectotype: 1 ♂, same data as lectotype (BMNH).

The lectotype bears Bigot's label "R. Semifulva. ♂. Australia. J. Bigot."; it is in fair condition, head and abdomen greasy, eyes partially collapsed, left mid and right hind legs lost. The ♂ paralectotype is conspecific with the lectotype, and retains all legs except the left hind leg.

The type-material of this species was incorporated into the BMNH collection in 1904, and each syntype bears a printed label reading "Ex coll. Bigot. Pres. by G.H.Verrall, Oct.1904." on which Austen has added "Australia." in pencil.

[*Xysta obtusa* Bigot, 1891 : 377. Not Tachinidae: belongs in Calliphoridae, tribe Rhiniini, valid species of *Rhyncomyia* Robineau-Desvoidy, see Zumpt (1958 : 164) (holotype ♀ from Assinie, West Africa, should be in BMNH, London, ex coll. Bigot but has not been located).]

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